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# Model MILITARY INTERNATIONAL

Issue 48 - April 2010  
[www.modelmilitary.com](http://www.modelmilitary.com)



## ANIMAL KILLER!

Tamiya's 1:35 scale ISU-152

## CHINESE HYBRID

Hobby Boss' 1:35 scale ZTZ-99A  
straight from the box



## THE ROTTEN RED FENCE

CMK 1:35 scale Skoda LT vz.35 in Operation Barbarossa

**INSIDE:** TRUMPETER 1:35 GUARDIAN ■ DRAGON 1:35  
WIRBELWIND ■ AFV CLUB SD.KFZ. 251 ■ AND MORE...

April 2010 / £4.20 / Issue 48



48

9 771749 886033





30



26



16



## REGULARS

### p 4 NEWS

What's new in the world of military modelling.

### p 48 FIGURES

Reviewing the latest figures to hit the market.

### p 52 DIARY DATES

A listing of upcoming worldwide models shows and events.

### p 54 SMALL SCALE

News and reviews in 1:76 and 1/72 scales.

### p 55 LETTERS

Model Military International's visitors have their say.

### p 56 INCOMING

MMI's thoughts on the latest kits and accessories.

### p 58 1:48 SCALE

Luke Pitt explores 1:48 scale military models, figures and accessories.

### p 60 BOOK REVIEWS

A look at the latest titles on our doostep.

### p 66 LAST POST

Late breaking news and ramblings of the Editor.

## FEATURES

### p 6 THINK TANK

Sherman Camouflage in the Middle East by Mike Starmer.

### p 12 BAPTISM OF FIRE PART ONE

Brett Green starts work on Tasca's 1:35 scale Sherman II Direct Vision.

### p 16 FROM THE FRONT LINE

Joel Russ presents Bulgarian Guardian photos from Afghanistan.

### p 17 PREVIEW

Trumpeter 1:35 scale Guardian by Brett Green.

### p 18 ANIMAL KILLER PART TWO

Sam Dwyer paints and weathers Tamiya's new 1:35 ISU-152.

### p 24 THINK TANK LITE

ZTZ-99A by Stuart Ransley.

### p 26 CHINESE HYBRID

Andrew Judson builds Hobby Boss' 1:35 scale ZTZ-99A straight from the box.

### p 30 THE ROTTEN RED FENCE

CMK's 1:35 scale LT vz.35 light tank by Jose Brito.

### p 38 TECH GUIDE

Finishing School Part Six by Brett Green.

### p 42 CHERBOURG 1944

Part One of a small scale diorama by Justo Mira.

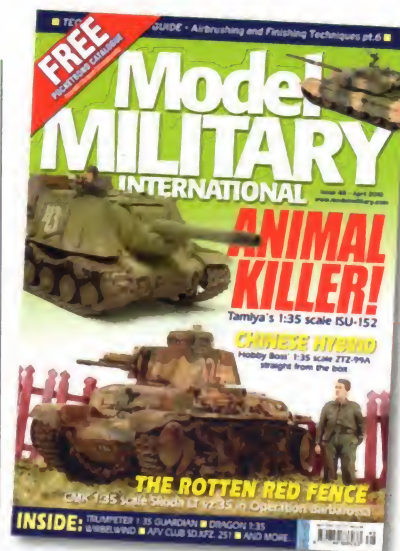
### p 49 PREVIEW

Dragon 1:35 Wirbelwind.

### p 50 RANDOM REFERENCE & PREVIEW

AFV Club's 1:35 Sd.Kfz.251/3 Ausf. C previewed by Stuart Ransley, plus Reference photos.

18



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## Afrika Korps Panzer II in 1:24 due from Tasca

**T**asca has announced a new 1:24 Tasca Panzer II, Ausf. F German Afrika Korps version for release in mid-February. This version will include the larger stowage bin, Jerry can holders and extra track. Options for modified a layout of equipment due to local repair will also be included.

Markings are provided for "R05" and "R06" of 10th Panzer Division 7th Panzer Regiment on North Africa Front and decals for an unknown unit. The layout of equipment differs for each decal option.

The new stowage has rather unique new clasps reproduced using laser cut paper.

ABER has announced that they will offering gun barrels and a photo-etched detail set for this kit and TA 24-001. Tasca is available in the USA from Pacific Coast Models [www.pacmodels.com](http://www.pacmodels.com)  
More information on Tasca's website [www.tasca-modellismo.com](http://www.tasca-modellismo.com)

## To The Last Bullet

The newest book from The Oliver Publishing Group is available now - "To the Last Bullet". This title documents the last year of Germany's war on three fronts. We will have a review of this title in a future issue of Model Military International.

Also due in 2010 are "First Blood - US 1st Armored Division in Tunisia", "Long road to Victory - British 7th Armoured Division" and "Workhorse - Panzer III in Africa".

## UNIQUE MILITARY MODELS FOR THE WAR AND PEACE SHOW

A unique model Pacific tank transporter will go on display at the War and Peace Show in July.

It represents the culmination of a year's work by Keith Palmar, from Blean, Kent, who has undertaken to create models of all the major military vehicles in the War and Peace Collection.

A major challenge on the Diamon 'T' was the rear suspension which comprises independent bogies, pivoted in the middle, which in the real thing would have ironed out to some extent, bumps in the cratered and pitted roads.

"It's taken a long time to get these models right," said Keith. "But I enjoy what I do. There's a lot to do to get the collection complete, for example a Beach Armoured Recovery Vehicle (BARV), an Achilles tank and an M40 self-propelled gun.

"I'm also working on a series of one-sixth scale German model tanks for another client."

But Keith does occasionally depart from the Lilliputian world of model making. He has restored a three-quarter ton Dodge military vehicle and a six wheel GMC. Currently he is working on a 1979 Chevrolet Blazer 4 x 4, which has no military connections at all.



## New GreatWall Hobby SWS Flak 43 on the way

GreatWall's has announced the third in their SWS series - this one mounted with a Flak43. Apparently this variant did see operational use.

A photo-etched set will be available as an optional upgrade to this set. Other upgrades already available in the GreatWall/LionRoar range are L3506 Ammo and Cartridge case and LB3514 Metal Barrel. The Airbrush Company will be putting together some discounted packages with these optional extras.

In more news from The Airbrush Company, Lifecolor has just released a new set of six acrylic paints, "Weathered Wood".

Check The Airbrush Company for more details [www.airbrushes.com](http://www.airbrushes.com)

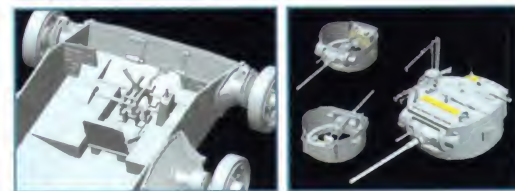


## At Last - a New Tool 1:35 Scale Valentine!

MiniArt has announced the future release of a Valentine Mk.IV in Red Army markings with a Soviet crew of five. This will be kit number 35092. The kit will be made up from 584 parts featuring individual track links, photo-etched parts and at least partial interior detail including gun breech, turret radio, drivers position and transmission.

Although we have had an injection moulded Valentine from Maquette, it was a difficult kit to build, and did not display the finesse of the latest offerings. MiniArt's kit will be something to look forward to and, if I am not mistaken, will be their largest AFV kit release to date. With a medium sized cruiser tank within their capabilities, who knows what we will see next?

Stay tuned for more details, or check out MiniArt's website. [www.miniart-models.com](http://www.miniart-models.com)  
MiniArt is available from Creative Models Limited [www.creativemodels.co.uk](http://www.creativemodels.co.uk)



## LARGE SCALE MARINE FROM NEW WORLD MINIATURES

The new 1:16 scale New World Miniatures U.S. Marine sculpted by John Rosengrant is finally ready for release, base not included. The figure will retail for \$60. Orders may be placed direct at [www.newworldminiatures.com/](http://www.newworldminiatures.com/) or sales@newworldminiatures.com

## Resicast New Releases

The busy Belgian boys at Resicast have just released a number of interesting new items, including their kit number 35.1211 Gpdr Mk I-II "North Africa" in resin and photo-etch; and 35.5603, Tanker with Map Case. For more information check out Resicast's website [www.resicast.com](http://www.resicast.com)







This cast-hulled Sherman II sports typical early disruptive camouflage, possibly based on the original pattern issued on 6 October 1942.

## SHERMAN COLOURS PART ONE – THE MIDDLE EAST 1942

Mike Starmer explores the development of British Sherman camouflage, starting with 1942 desert colours in the Middle East.

In view of the recent issue of the 1:35 scale Sherman II and III kits from Dragon and Tasca, and a number of conversion sets in addition to a range of smaller scale models of this important tank, this seems be a good time for modellers to learn of the two different official camouflage schemes both widely used at different times in the Middle East. Contrary to many modellers' and kit manufacturers' ideas on British camouflage schemes, there were official,

specific disruptive patterns for vehicles; these are both presented in this article. Apart from a few exceptions these patterns were adhered to both in Egypt during 1942 and later Sicily and Italy from mid 1943.

The development history and operational use of the Sherman tank has already been covered in other publications. This article will deal solely with the colours and disruptive camouflage of what became the most common tank in the British and Commonwealth

armies. The period covered begins in September 1942, when Sherman tanks were first delivered to the 8th Army in Egypt, and ends in Italy with the cessation of hostilities in May 1945.

There are numerous photographs of these tanks in British and Commonwealth service dotted about in various earlier publications and in later books dedicated exclusively to Sherman tanks. Unfortunately, these books often have incorrect captions when describing the colours or pattern

on the subject matter. Older artwork depicting these tanks is often in error too. Although the disruptive design shown in these it has been based on what is visible on a single photograph, the artist has been obliged to use imagination to complete the illustration. Two recent pictorially dedicated publications are in the Images of War series. 'Sherman Tank' by Gavin Birch, Pen & Sword 2005, ISBN 1-84415-187-5 and 'British Sherman Tanks', by Dennis Oliver, Concord Publications



2006, ISBN 962-361-131-5. Both of these have photographs of Middle Eastern Shermans throughout the period. In addition, Dennis Oliver's 'Swallows' by Mushroom Publications about Shermans at Alamein is worth getting for the artwork and markings.

The first batch of about 252 Sherman tanks from the U.S.A. arrived safely in the Middle East by 9 September 1942. These were almost all M4A1 tanks originally destined for the U.S. Army's 2nd Armoured Division. They were designated Sherman Mk. II in British service. After unloading these tanks were taken to Base Ordnance Depots for fitting out with British equipment such as radios, sand shields, 'Sunshield' brackets, Crusader type blanket box on rear of the turret, racks for 5 gallon water cans and numerous interior fittings to stow equipment and ammunition plus desert painting. Later, batches of the same version followed, soon supplemented and then replaced by the twin diesel engined M4A2, Sherman Mk. III.

#### OFFICIAL PAINTING POLICY

When the Shermans arrived the painting policy in effect then had originated in a signal from GHQ MEF, G.SD 4/105 of 6 October 1941, later confirmed by General Order (G.O.) 1272 of 5 December 1941. This specified that in Egypt a single basic colour of either Light Stone (B.S.C. No.61 or M.E.S.C. No.

23) or Portland Stone (B.S.C. No. 64 or M.E.S.C. No. 11), according to supplies available will be used.

The option of one additional colour selected by Commanders to be superimposed on the basic colour was allowed. The intention of this order was that each Command Area, e.g. Palestine, Iraq, Malta and so on would adopt one disruptive colour and pattern suitable for the area and apply it over Light Stone No. 61 or Portland Stone 64 although in practice this did not turn out quite as intended.

In accordance with this order, the very first Shermans through workshops were painted Light Stone 61. No disruptive colour was applied. The regiments of 2nd Armoured Brigade were some of the first to receive Shermans. Very few photographs of these early Shermans show any sort of brigade applied disruptive painting but there is one on which an irregular undulating light line may be seen along the side. There is disagreement about this, on one hand this is thought to be a complete scheme with a slightly darker colour below the line whilst others are of the opinion that only the line exists and the squad detailed for the work either had no chance to finish or progress was halted by the introduction of the October orders.

#### A FUNDAMENTAL CHANGE

The Camouflage Directorate at GHQ MEF Cairo produced an

appraisal document entitled, 'NOTES ON VEHICLE PAINTING' (T.N.A file WO201/ 2846).

Although undated, it was probably written about September 1942 and contained a summary of previous camouflage policies and colours including the following observations.

By early 1942, the authority for Commanders to apply their own disruptive pattern had degenerated to the point where sub-formations down to Brigade level were designing and applying their own private patterns to their equipment and vehicles. The adverse effect of this painting was twofold. Many of the colours and disruptive designs had little or no camouflage effect. More seriously, they provided the enemy with a useful additional means of identifying our units and piecing together our Order of Battle, this last being most prejudicial to security.

Field trials had indicated that a 'universal basic colour, a kind of earthy pink' and a disruptive colour of 'dark olive green' would be the most suitable colours for general use. Trials had indicated that only certain classes of vehicle would justify the expense of time, labour and paint as a possible protection in ground view; disruptively painting the enormous number of 'B' vehicles with little tactical value was unjustified.

As a result of the Directorate's assessment, immediate steps were taken to standardise the policy and

practice of camouflage painting of vehicles throughout the whole of Middle East Forces. Previously one of the main tenets of disruptive painting, that no two vehicles within a unit should carry a similar disruptive design, was now discarded. In future under the new policy, all vehicles of the same type or class would carry an identical disruptive design.

To affect this, a new G.O. of 6 OCTOBER 1942, the first of two issued at closely dated intervals, cancelled G.O. No. 1272 of 1941 and all previous instructions and directives on camouflage painting. Paragraph 3 below, specified the colour details, and provided disruptive designs for a range of particular vehicles that included the Sherman tank.

#### INSTRUCTIONS ON CAMOUFLAGE PAINTING ON AFV'S, JEEPS & TRUCKS.

3. (a) The BASIC COLOUR common to whole of MEF is designated "DESERT PINK- No. Z.I." Approved samples of the Colour and tone are held as controls by OS and the Camouflage Directorate.
- (b) The Disruptive Pattern will be in Dark Green, designated "DARK GREEN - No. PFI." If Dark Green is not available, Black, Very Dark Brown or Dark Slate may be used.
- (c) All paints will be as Matt in finish as possible.
- (d) The Disruptive patterns will be as laid down in diagrams to be issued by the Camouflage Directorate to OS under the same

More Sherman IIs, this time partially obscured by sand kicked up from their own tracks. The dark disruptive pattern may still be seen on the hull and the turret.







# Think Tank - Sherman Colours in the Middle East

◀ reference as this G.O.

In line with the new policy, further instructions on 19 October 1942 cancelled the 6 October designs but NOT the colours and at least ten disruptive drawings were issued for class or individual vehicle types, A/142/1 for Sherman tanks among them. The /1 suffix may indicate that this is a replacement drawing for the earlier issue. On the whole the instructions paraphrased below were closely followed. The instruction of 19 October was ratified as G.O.1650 of December 1942.

## INSTRUCTIONS ON CAMOUFLAGE PAINTING ON AFVS, JEEPS & TRUCKS.

1. These instructions and designs

cancel those previously issued under CRME/ 42279/ G (CAM) of 6 Oct. 42.

2. The aim of the pattern is to hinder quick and accurate identification of the various types of Fighting Vehicle, to hinder accurate fire on known vulnerable parts, and to assist concealment on such favourable ground as Ghats and broken ground.

3. The dominating lines of the desert are horizontal. Anything vertical is conspicuous. Therefore the DISRUPTIVE PATTERN MUST BE GENTLY OBLIQUE OR HORIZONTAL. It must NEVER run up and down vertically. (Their emphasis)

4. The DARK patterning is designed

to break up hard straight edges and places where sunlight surfaces meet shadowed surfaces. It is also designed to "swallow up" and distort the hard rectangular black holes that are caused by windows, slots and recessed surfaces.

5. The finished vehicle should show more light basic colour than dark patterning.

6. If a spray gun is used it is important to spray to a clear cut edge by any available means. If the edges of the dark patterning are allowed to 'blur off' gradually the object of the pattern will be largely defeated.

7. Certain undercut portions are to be painted WHITE to lighten the dead blackness of the shadows.

These surfaces are indicated on the diagrams.

8. Start work from the side and front elevations and then carry the pattern over the top.

As may be seen from the Sherman drawings, all of these factors were taken into account when the disruptive patterns were designed. There was to be no more of the 'patches where you fancy them' and 'make it up as you go' type of painting.

G.O.1650/1942 remained in force until cancelled in April 1943 when a new scheme specifically for use in the more verdant and duller Tunisian and Sicilian terrain was introduced.





### SHERMAN DISRUPTIVE PATTERNS 1942

The TNA file contains photographs of models of various vehicles with disruptive patterns applied. This strongly suggests that in the initial stages the designs were first tested on models and then developed via trials into suitable patterns. If the pattern filled the criteria then the design would be properly drawn copied from the model and further copies distributed to the appropriate units through normal channels. To lend weight to this theory the full effectiveness of all of the G.O.1650 designs can only be appreciated when they are seen on a three dimensional object.

### THE FIRST PATTERN

This first scrap drawing of a disruptive pattern may have been the original pattern issued on 6 October 1942. This was drawn by the author based entirely on photographs. This pattern predominantly resembles the later official drawing and shows a design that was only applied to M4A1 Shermans of the 2nd Armoured Brigade's 9th Lancers and Queen's Bays. It can only be identified on photographs taken in late September and early October.

The most distinctive feature of this pattern is the long stripe along the left side that continues into a 'V' shaped area across the glacis plate. The patch at the

top of the glacis is designed to disguise the hatches and vision slots. Due to reflections and excessive wear it has not been possible to positively define the disruptive areas on the hull front and a good clear picture of this area has yet to be found. From what may be seen, one arm of the 'V' extends through the lap gun housing and connects with the top patch. Rather oddly in the photographs, the inner faces of the track-guards are often not painted with the disruptive colour. The entire top length of the gun barrel is dark and a few tanks have white on the underside of it. Many of these tanks have all of the suspension units and under hull a dark tone, believed to be U.S. Olive Drab. Some have the outer faces of the bogie units and wheels are light coloured while the hull behind them remains dark. Otherwise the rest of the design conforms to drawing A/142/1.

There are photographs of these units in the RAC files but all of the most useful pictures from this source have already been published. Photographs of this design may be found in the following books:-  
Ref. 3, plates 8 & 10, (The captions have been crossed.)  
Ref. 4, page 7 lower left, and page 8.  
Ref. 5, page 33.  
Ref. 6, page 63 top.  
Ref. 8, pages 108, 114 and 127.

In the past the colour of these tanks has been reported as 'sand with black' probably due to the high contrast and grainy reproduction. Closer examination of the black background to the divisional 'rhino' emblem clearly shows that this is darker than the disruptive colour which implies that the disruptive paint is green over Light Stone 61.

### MAIN DRAWING A/142/1

This is the official drawing in original format as issued on 19 October 1942. Although a rather crude presentation of a Sherman, the disruptive pattern can be clearly identified on numerous photographs of Mk. II and Mk. III Shermans. The design conforms to the required criteria, so that when parked in suitable locations the patterning would help to merge the vehicle with its surroundings. With Shermans only the gun barrel and under-bow, were considered worth counter-shading in pure white, (counter-shading is more correct). While the Directorate accepted that from experience counter-shading may not be worth the effort, these white areas may be seen on almost every photograph of Shermans with this pattern.

The modeller should bear in mind that the criteria states that a disruptive colour should never end at an edge or corner, it should instead stop short or continue round onto an adjacent surface and finish with an irregular demarcation line. For examples, please see the following:  
Ref. 1, page 111 top and bottom.  
Ref. 3, plate 6, a well-worn example, this might be Slate over Desert Pink or Light Stone No.61. Plates 16, 17, 35 and 37 all appear to be standard pattern.  
Ref. 6, page 63 bottom. Again this shows a HQ unit with M3 Lees in the background. This might be the same unit as the one above.  
Ref. 8, page 110. Possibly a HQ unit, note the M3 Lees with twin aerials mounted on the hull roof. These Lees carry the same disruptive pattern as issued for the M3 Grant tank in October 1942. ►

The different application of the disruptive pattern is very clear on this Sherman III. The prominent hull markings place this photograph around the end of December 1942!

Post-1942 pattern on another Sherman III.







# Think Tank - Sherman Colours in the Middle East

## A/142/1 VARIANT

The second scrap drawing shows a variation of A/142/1. The tanks with this pattern exactly match the official drawing except across the glacis plate where there are two narrower diagonal stripes, the lower one is raised considerably to clear the transmission bulge. This feature may only be seen on M4A2 Sherman III's used by the 2nd Armoured Brigade and applied to tanks of the Queen's Bays and 10th Hussars. The tones seen on photographs generally display a high contrast that indicates green over Desert Pink. Photographs of this variant may be found in the following books:

Ref. 1, page 152.

Ref. 2, plates 130 & 133.

Ref. 9, page 137.

The October disruptive painting order for Desert Pink specifically applied only to new and repaired equipment. Before October numbers of Shermans had already only been finished with a basic colour of Light Stone No.61. Some repaired tanks had the correct disruptive design applied in black just before re-issue whereas others did not. The most likely reason being the shortage of Desert Pink

and Dark Green or because of insufficient time and materials to comply with the order in view of the impending major operation. Some of these Shermans retained these colours for a considerable time, a few until the end of the campaign in North Africa. A noteworthy feature of tactical markings appeared at this time on

Shermans, Grants and Crusaders too. You will see on some photographs that the disruptive colour is often not applied inside the squadron sign painted on the turret. This is because the camouflage squads detailed to add the disruptive design to previously issued tanks did not carry out any tricky paintwork, they simply

skirted around the markings.

The drawings need not be slavishly followed. Simply maintain the correct start and end points, general shape of the areas and proportions. You will see numerous small variations on photographs which are worth copying but do not make something up that cannot be seen on photographs. ■

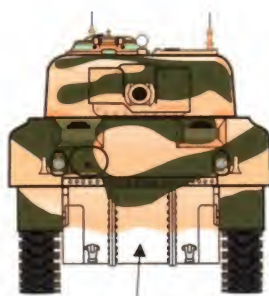
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2. White, B.T. BRITISH TANK MARKINGS AND NAMES. Arms and Armour Press.
3. Perrett, B. ALLIED TANKS IN NORTH AFRICA. Tanks Illustrated No. 21.
4. Sandars, J. THE SHERMAN TANK IN BRITISH SERVICE. Osprey Vanguard No. 15.
5. Barbarski, K. POLISH ARMOUR 1939-45. Osprey Vanguard No. 30.
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7. Plowman, J & Thomas, M. '4th NEW ZEALAND ARMoured BRIGADE IN ITALY'. Plowman, Christchurch 2000.
8. Buffetaut, Y. DEBARQUEMENT EN SICILE'. Collection hors-série Militaria No. 33.
9. Buffetaut, Y. L'ETE 1943 (2) OBJECTIF MESSINE! Collection hors-série Militaria No.36. (Although French text, these have some good photographs but most of the artwork for British equipment is inaccurate.)
10. 'AFV NEWS' vol. 11 No.4. Two photographs of Grant converted to dummy M4.
11. Crow, D. AFV PROFILE BOOK 2'. Page 78.
12. Chamberlain & Ellis, 'SHERMAN AND CHURCHILL SPECIALS'. AFV Profile 20.
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14. Fletcher, D. 'THE UNIVERSAL TANK Part 2'. HMSO.
15. File WO 204/ 7964; TNA Kew.

## SHERMAN DISRUPTIVE VARIATIONS - 1942/3.

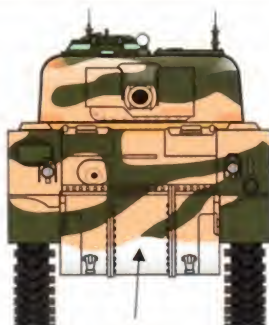
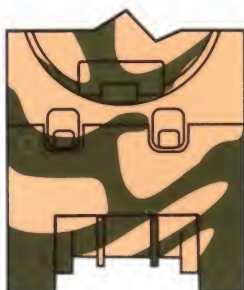
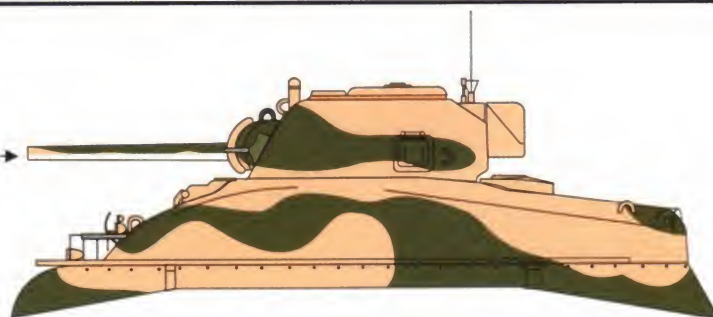


Inner Faces are basic colours only



White Counter-shading

This design is only applicable to M4A1 Shermans of the 9th Lancers and Queen's Bays of the 2nd Armoured Brigade just prior to and at El Alamein in October 1942. This drawing is based entirely of photographs. The rest of the tank is painted to conform to Brawing A/142/1.



White Counter-shading

This variation is only applicable to the M4A2 Shermans of the Queen's Bays and 10th Hussars in Tunisia during 1943.

The drawing is based entirely on photographs. The rest of the tank is painted to conform to drawing A/142/1.





The Editor takes a step-by-step approach to building Tasca's excellent 1:35 scale cast-hull Sherman II.

# BAPTISM OF FIRE

## PART ONE – ASSEMBLING THE SUSPENSION AND LOWER HULL

**T**he Sherman was the backbone of the Western Allies' armour formations and one of the most numerous tanks ever produced. The General Sherman, to give it its correct title in British Service, was named after the US Civil War General according to the practice of the UK Purchasing Commission at the time. The code name Swallow was initially assigned for official correspondence of the period, but somewhere along the line the name Sherman stuck.

After the disastrous fall of the Tobruk Garrison in the Middle East, things looked very bleak. The British 8th Army was all that stood in the path of Rommel's Afrika Korps, whose confidence was high and equipment was first rate. Winston Churchill happened to be in Washington at the time and could hardly conceal his deep shock at the losses it seemed the Suez canal might fall to the

Germans. Roosevelt immediately offered whatever assistance might be needed. Whilst it was originally planned to send the US 2nd Armoured Division, the timeframe to ship an Armoured Division was thought to be too great so they sent the next best thing – 300 brand new M4 Medium tanks and 100 M7 Self propelled guns drawn from the US Army's own stocks (which were pretty low as they had just gone into production). In less than four weeks the first shipment was on its way in July 1942.

The Swallows were a mixed batch of M4A1 and M4A2 tanks, designated Sherman II and III respectively by the British,

displaying the early features of the Sherman family including Direct Vision slots for the driver and co-driver, and M3 style suspension. The British further modified these early Shermans based on their experience, adding sand shields, turret stowage boxes, water can racks and "sunshield" rails. These latter items were rails to hold a deceptive camouflage shell designed to make the vehicle look like a truck.

During the Second Battle of El Alamein in October 1942, over 318 Shermans of M4A2 and M4A1 models were fielded, all of them early models with Direct Vision slots for the driver's and

co-driver's vision. Most of these used the earlier M3 Medium Tank suspension, however a number were fitted with the new M4 VVSS suspension. They continued to serve right through the North African campaign with M4A1 in the 8th Army and the recently arrived 1st Army in Tunisia replacing its Crusaders for M4A2 Shermans. Only the M4A2 and M4A1 served with the British in North Africa with almost all of those in the 8th Army being the Direct Vision hulls.

The Direct Vision variant continued in production until well into 1944.



Tasca's early Sherman II offers two marking options. These include one of the earliest Shermans involved in the Battle of El Alamein.





The lower hull is a flat-packed multi-part affair.



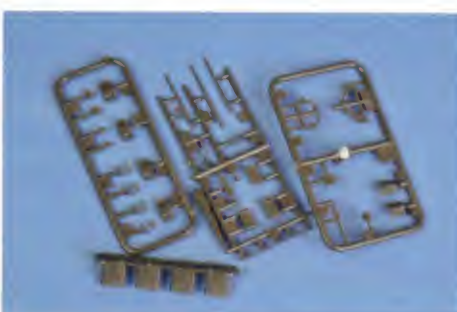
The upper hull is a simple single piece moulding.



Tasca's turret is split into upper and lower sections, and represents the early style.



The early M3-style suspension with the centrally mounted return rollers is fully workable.



A number of parts are also supplied in dark olive green plastic, including a machine gun and jerry cans.



The modest photo-etched fret supplies a grille for the engine deck (sadly hidden by a solid cover), debris guards for the sponson vents and retaining straps for the exhausts.



Two small sprues of clear parts are included too.



The tracks each comprise four lengths of flexible vinyl. This material may be attached using regular polystyrene cement.



Markings are supplied for two options on the high quality decal sheet.

# **TASCA'S 1:35 SCALE SHERMAN II (EL ALAMEIN 1942)**

Tasca from Japan released their 1:35 scale Sherman II Direct Vision Type (El Alamein 1942), kit number 35-014, in 2008.

The model comprises more than 400 parts in dark yellow plastic, a further 29 in dark green, 14 parts on the clear sprue plus a photo-etched fret, small rubber

sheet and eight lengths of flexible track. Markings for three vehicles are provided. Two of these were participants in the Second Battle of El Alamein.

Tasca's Sherman II is flawlessly moulded with excellent detail, and dimensionally matches the well-regarded scale drawings in R.P. Hunnicutt's "Sherman: A History of the American Medium Tank".

Six of the sprues are common with Tasca's earlier Sherman releases, but three of the sprues were seen for the first time (but not the last) in this kit.

A number of options are provided in the box, including alternate exhausts, sand shields, sunshield rails and a defensive cupola-mounted M2 .50 cal machine gun. Four jerry cans

and three PoW flimsies are also provided.

A large number of parts will be left over that do not apply to this variant. These include drive sprockets, cast nose and turret appliqué armour. This will be a bonus for the spares box.



The tyres on the plastic road wheels were roughed up with a tiny dental burr fitted to the Dremel motor tool.



The effect is a bit extreme before it is subdued with a coarse sanding stick.





The lower suspension arms need some slight modification prior to assembly. The top of the bolt is shaved off and a small hole drilled into the middle. The unmodified part may be seen on the left, while the part on the right has been corrected.



Some, but not all, of the suspension elements awaiting assembly. I did not want my suspension to be workable, so another minor variation from the instructions was required.

## BUILDING TASCA'S EARLY SHERMAN SUSPENSION

In this first instalment, I will be assembling the suspension components and the lower hull covering Steps 1 through 7 of the instructions.

In fact, although the instructions are provided in 25 steps, once you have the suspension and lower hull assembled, you will have all of the hard work done.

By far the most fiddly aspect of Tasca's Shermans is the suspension. On the upside though, the suspension units are superbly detailed and they fit perfectly. You just need to stay organised and take your time.

Tasca supply the early M3-style bogies with this kit. The most obvious distinguishing factor for this suspension is the return roller

centred at the top of the housing. Tasca has cleverly designed these bogies to be fully workable. The four main suspension arms and the rockers on each unit are separate parts that may be left free to move. The really clever part is the inclusion of a spongy rubber mat, which is designed to be cut up and inserted in the top of the bogie. This will offer some resistance but still allows the suspension arms to rock (or to drop when unsprung), just like the real thing.

The only tiny problem is that Tasca provides flexible vinyl tracks. The tension of these might not permit much movement of the bogies. Individual track links will be a better option if you wish to depict your Sherman in action over rough terrain, but do keep in mind that the "live" T51 track will not

sag on the top run.

In my case, I was planning to sit the finished Sherman on a flat surface so I did not need - nor indeed want - the suspension to be workable.

Jim Wechsler backdated Tasca's Sherman II to the T6 prototype in Issue 46 of MMI. In his article he pointed out that the early suspension arms needed a minor modification from the way the parts were moulded. My Sherman II required the same surgery.

The top of the bolt on the outer edge of Parts B4 and B5 needs to be shaved off and a small hole drilled into the centre. I carved the top of the bolt with a sharp hobby blade, then marked the centre with the tip of the same blade before drilling with a pin vise.

If you are really keen you could

perform the same surgery to the inside arms, Parts B14 and B15, but I did not bother as my handiwork would have been hidden in the dark nether regions of the vehicle.

Before assembling the suspension units, I roughed up the tyres on the road wheels. The first step was to mount each wheel in turn on a toothpick and randomly run a small dental burr in my Dremel motor tool over the outside of the plastic part. The result was pretty extreme at this stage, but a quick once-over with a coarse sanding stick settled the effect down to a more realistic level.

All the suspension parts were cut off their sprues and cleaned up with a knife and sanding stick. Take care when assembling the suspension arms and the road wheels that the grease nipples



Strip styrene was cut to 4mm widths using my new-generation Chopper. These little plastic strips replaced the kit's flexible rubber to pack the inside of the suspension units.



The first solid plastic strip is carefully placed inside the suspension housing using a tacky Grabit-Stix.



A second strip is glued to the top of the first to obtain a total height of 1 millimetre.



The spring section is glued to the plastic strips and the suspension housing. Whereas the rubber sheet would permit movement, the solid plastic will not.



The right-side suspension arm must be fitted first. I did not apply glue at this stage. The left-side arm locks over the top centre section of this part.



The front face of the suspension unit clicks into place over the suspension arms and the idler wheel after a little bit of fiddling.



face outward. With Steps 4 and 5 complete, these sub-assemblies were set aside to dry thoroughly overnight before returning to complete the bogies.

I deviated from the instructions in Step 6 after gleaming yet another tip from Jim Wechsler, this time in a Blog on the venerable armour modelling site, Track-Link [www.track-link.net](http://www.track-link.net). Jim suggests that a piece of .040" styrene can be packed inside the bogie to replace the rubber sheet. The solid plastic will effectively immobilise the bogie, maintaining it in a flat stance. I did not have .040" thickness plastic strip in my workshop, so I resorted to a sandwich of two 0.5 mm thick strips instead. Twelve pieces of plastic strip were cut to size using my "Chopper" tool. These were carefully glued and placed inside the top of the bogie assembly, instead of the rubber sheet.

I spent a few puzzled minutes trying to figure out why the two suspension arms would not both fit onto their locating pins inside the bogies. I finally figured out that the arms interlock in the middle, and that the right arm must be positioned first.

Just to be safe, I also glued the rockers to the main suspension arms. This locked everything into place. The first time I fitted the front cover (Part B3) to a bogie it took a few moments of fiddling, but it eventually snapped into position. A little Tamiya Extra Thin Liquid Cement along the join lines and the job was finished.

#### LOWER HULL

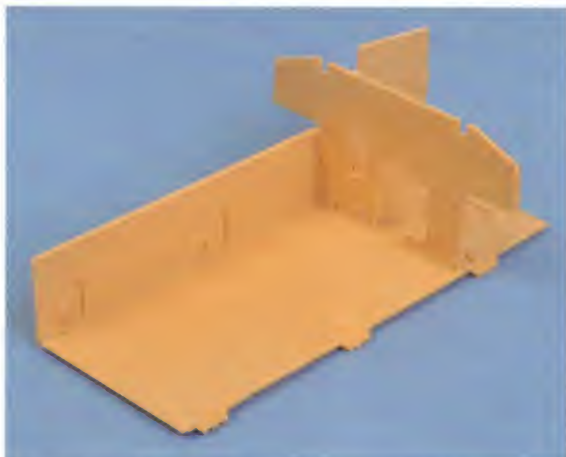
Tasca has moulded their lower hull in a multi-part flat pack. Presumably, this allows for the maximum detail to be moulded to the outside surfaces of the parts, results in less moulding marks and permits more options for different hulls. However, it does mean a bit more work for the modeller. Fortunately, it is not much more work.

The instructions suggest the sequence of assembly, and it worked a treat for me.

First, the nose joining strip (Part C43) was glued to the bottom of the hull, followed by the firewall (Part E5). Each of the two sidewalls was now attached to the edges of the lower hull and the firewall. The rear hull almost clips into place with impressive precision. Finally, the sponson covers (Parts E9 and E10) are glued to the top of the hull sides and to the overhang of the firewall and the rear hull. This entire step took around a half an hour, and the fit was perfect. ■



The lower hull parts are laid out here after cleanup, awaiting assembly.



The firewall is fixed in place first, followed by the starboard sidewall. The port sidewall comes next.



Here is the basic lower hull assembled. Note the sponson covers above the hull sidewalls.

#### Acknowledgements

Thanks to Al Bowie for the historical text at the beginning of this article, and to Jim Wechsler for the construction hints.

**Next time we will detail the rear hull plate, assemble the nose casting and assemble the upper hull.**

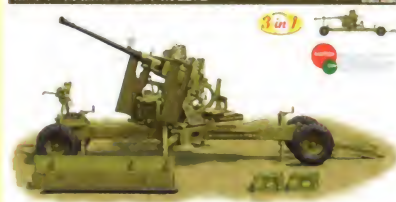
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**FROM THE FRONT LINE** is a regular new feature for Model Military International magazine. If you have seen recent overseas service, or if you are on the front lines right now, we'd love to see your photographs of vehicles, uniforms, or other items that might be of interest to military modellers. Send your photos or enquiries to [editor@modelmilitary.com](mailto:editor@modelmilitary.com)

# BULGARIAN M1117 GUARDIAN

Joel Russ has some photos of an interesting Bulgarian Guardian in Afghanistan.

Here are some photos of a Bulgarian Guardian Armoured Security Vehicle at Kabul International Airport. This is part of the Quick Reaction Force that is prepared to respond to any type of emergency, typically within ten minutes or less. ■



Not your typical International Airport car park!



This Bulgarian Guardian is finished in overall Dark Green. Note that the national markings are in the stick on, peel off style.



The 40 mm Mk.19 grenade launcher and the .50 caliber M2HB heavy machine gun may be seen from this view. Other Bulgarian M1117s have been fitted with the NSVT heavy machine gun instead of the M2. The towing chain is of interest too.



The Guardian is fitted with a cluster of smoke launchers on each rear corner of the turret.





# EN GARDE!

The Editor checks out the latest variant of the venerable Commando line, Trumpeter's 1:35 scale M1117 Guardian Armoured Security Vehicle.

**T**he M1117 Guardian is an all-wheel drive Armoured Security Vehicle manufactured by Cadillac Gage, a division of the American manufacturing conglomerate Textron.

The M1117 is a development of the Cadillac Gage V100/150 family. Enhancements include advanced modular expandable armour, comprising ceramic composite appliqué on the exterior and spill liner for the fully air-conditioned interior. Armament is a 40 mm Mk.19 grenade launcher and a .50 caliber M2HB in a rotating enclosed turret.

The Guardian initially entered service in 1999 in small numbers with US Army Military Police Corps. However, the vulnerability of even upgraded Humvees to small arms fire and IEDs has led to the expanded use of the M1117 in front line units.

Trumpeter's 1:35 scale M1117 Guardian comprises 303 parts in well-moulded light grey

plastic, 23 parts in clear, two frets of photo-etched brass, five black vinyl parts and a 100mm length of copper chain.

I assumed that this kit would have some commonality with the HobbyBoss family of Commando armoured cars, but I was wrong. This is an all-new kit.

The main hull is split into upper and lower sections, over which separate appliqué armour sections are applied. Photo-etched armour is also supplied for armour inside the wheel well and on the lower hull. I was impressed with the non-slip surfaces moulded to the hull and turret parts. The texture looks just right.

Hull and turret hatches are separate, but the interior is completely barren. I imagine that it will not take long for the after-market to fill this space. The kit offers the option of solid or photo-etched grilles. I think the photo-etched part looks great, but you will want to blank off the

engine bay to avoid that pesky see-through look.

Tyres are supplied in flexible black vinyl. An optional flexible black 40 mm ammo belt is also offered. The suspension parts are well detailed. They seem to be designed for the wheels to be fixed in the straight-ahead position.

Vision blocks are separate clear parts.

Smaller details are also very well done. The various light guards are moulded in fine delicate plastic. These should look great on the model.

Markings are supplied for two vehicles plus a bunch of generic numbers and letters. These will come in handy for the spares box.

Trumpeter's new 1:35 scale M1117 Guardian looks like a very nice model. I am looking forward to seeing it built up.

Highly Recommended. ■

Thanks to J.B. Wholesalers for the review sample  
[www.jbwholesalers.com.au](http://www.jbwholesalers.com.au)



The hull is split into upper and lower halves.



Nice non-slip texture is moulded onto appropriate surfaces.



The basic turret upper section is moulded as one piece – with plenty of add-on parts!



Various guards are supplied on the sprues. These are delicately moulded.



Hatches feature detail inside and out, but there is no detail inside the hull or turret.



Wheel hubs and suspension parts are nicely detailed.



Two photo-etched frets provide yet more detail for underbody armour, engine deck grille and more.



Vinyl Michelin tyres look good. The ammo belt is provided in flexible vinyl as an option to the solid plastic part too.



Vision blocks and headlights are supplied on the clear sprue.

Markings are supplied for two vehicles, but the generic numbers mean that a large selection of Guardians could be modelled.

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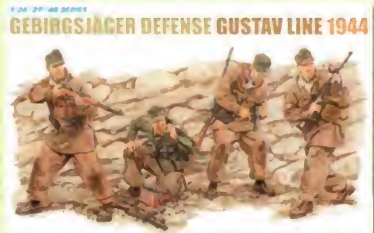
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Low and menacing, the ISU-152 must have been a daunting target for German Panthers and Tigers. Ammo boxes stowed on the rear deck add to the low slung look by dropping the suspension to the bump stops.

# ANIMAL KILLER!

## PART TWO – CHANGES AND FINISHING

Sam Dwyer picks up where the Editor left off with his new Tamiya ISU-152, and decides to make some changes...

**W**hen Brett suggested that I paint his shiny new Tamiya ISU-152, I jumped at the chance. This new kit fresh from Tamiya is a peach. Brett has already been over the construction side of things in Issue 45 of Model Military International, so there isn't really any need to revisit what he did with the build. Brett did a fantastic job building the kit out of box, but I really wanted to chop and change the kit from standard.

### MAKING CHANGES

I wanted to depict a vehicle that had seen some pretty hard service, but was still soldiering on. In the Concord book "Stalin's Heavies" there are a couple of shots of heavily laden ISU-152's with the engine deck piled high with 152mm ammo crates. This

vehicle is missing its fenders, and its suspension is heavily sagging at the rear.

The first step was to have at the kit with a razor saw. I carefully removed most of the right side fenders, and most of the left side fenders, leaving only the front left fender. I trimmed the fender extension from the front left fender, and then drilled out the mounting holes where the fender clips went. While on the front of the vehicle, I drilled out the spare tracks, to accept track pins. Little details like this really add to the model, it's the one percenters that count!

Tamiya has incorporated a huge amount of detail into this kit, right down to the rolled armour texture on the hull plates. I would normally augment this by texturing the

plates with glue, but didn't need to this time. I did replace the kit grab handles with brass wire though. First, I removed the kit parts that Brett added, and glued on a punched styrene disk. I then drilled a hole to accept the brass wire through this disk, and then glued the handle through the

This is how I got the model from Brett. Typical Tamiya quality, ease of construction and outstanding detail. Brett built the model out of box, so I couldn't leave it that way!







Tamiya has incorporated subtle rolled steel armor texture and weld detail everywhere on this model.



I removed the kit supplied tracks and replaced them with Friul model metal tracks. These capture the characteristic sag of IS series tanks.



Grab handles were removed and replaced with brass wire. I glued a disc of styrene on first, then textured it with a pyrogravure to get the weld done.



More welds! I removed the external fuel tanks and rear fenders, and added their weld remnants from 10 thou styrene, textured with glue and a knife blade

holes. Once the glue was dry, I textured the styrene disk with a pyrogravure to simulate the weld holding the handle to the hull. By drilling the handle holes through the hull, you ensure that you won't break the handles off every time you pick the model up!

In removing the kit fenders, I needed to show where the welds were that held the fenders on. As with my Ersatz M10 article in Issue 46, I used Plastruct 10 thou styrene rod for these welds. I marked on the hull where the welds were to go, then cut about 100 or so 2mm lengths of 10 thou rod. This was then glued on with regular liquid glue, and allowed to harden. Once the glue had cured, I softened the rod with another application of liquid glue, and added weld texture with an old Nr.11 scalpel blade. It

sounds easy, and it's an easy process, but it's a tedious one, specially when you do it all in one sitting. Again, adding little details like this really makes a difference to your model.

I ripped the kit tracks off, not an easy task as Brett had used what looked to me like a full bottle of glue to attach the tracks to the wheels. I softened the glue joins with an application of liquid glue, levering

the wheels carefully from the tracks. I replaced the kit tracks with Friul model metal tracks. There is absolutely nothing wrong with the kit tracks, they're fantastic, but I wanted to dump the rear suspension, and removing the tracks was necessary to get to the rear suspension arms. I attempted to remove the arms from their mounts on the hull, but they were well and truly glued in there. So, I resorted to plan B - brute strength. I cut through the rear 3 suspension arms with a razor saw, and mashed the rear of the vehicle down with my palm on the engine deck! I then applied super glue to the gaping cuts in the suspension arms to add some strength to these, and to fill the gaps. Once the super glue had gone off, I covered the whole mess in Tamiya grey putty. This covered the gaps, and added some nice mud texture to the running gear. While I was down there, I added more putty to the rest of the hull underside, starting the weathering process before paint (something new to me).

I needed to add some ammo crates to the engine deck per the photo of the real thing I was depicting. Mini Art has just released a set of 152mm ammo and ammo crates so I chased down a set from eBay. Unfortunately, you only get 8 crates in the set.

I resorted to casting up duplicate ammo crates using the plastic Mini Art part as a master. I used a simple one-part mold to pop out copies, 14 in total. The ammo boxes were glued together as a one-part stowage module for ease of handling and painting. The photo of the real vehicle shows the ammo boxes covered with a tarpaulin and a tow cable. I added a tarp from rolled out Apoxie Sculpt. The tow cable came with the Tamiya kit. A Tasca German Jerry can, a German entrenching tool and a spare Friul track link topped off the stowage.

## COLOUR SCHEME

When anyone thinks of Russian armor camouflage colours, they usually think Green, Green or Green. This wasn't always the case. There is documentary evidence of three and four colour hard edge camouflage patterns seeing limited use. However, the vehicle I based mine on featured, surprise surprise, a green single colour camouflage scheme. I used Gunze H303 for the basic colour, not worrying too much if it was the scientifically and anatomically correct shade of green, as I planned to weather

some minor gaps were filled with Tamiya putty. These gaps were from my vigorous removal of fenders and so on, not from Brett's construction!







Here you can see I've added the Friul tracks, these are easy to construct, only taking an hour in total. Being white metal, these are weathered and treated differently from the rest of the model. See body of text for a detailed explanation.



I used Tamiya putty, applied roughly, to simulate mud accumulated behind the suspension. Its easier to add it before painting than after!



Better get that suspension looked at - is suspension that low legal? The vehicle I based this model on sits very low on its suspension - a result of having a huge load of ammo boxes on the engine deck.

I needed a stack of ammo crates for the rear deck. I used a Mini-art plastic ammo box for a 152mm howitzer, and cast heaps of copies. I added a tarp from Apoxie Sculpt and various other stowage items from the spares box.



I cut and repositioned the rear suspension arms to achieve the lowered look at the rear. You can also see that all I've really done is add minor details, a testament to the quality of the Tamiya base kit.



◀ this beast quite heavily. Over the semi-gloss Gunze paint I applied the kit supplied decals. On the paper, these decals look thick, and a nightmare to use. In application, nothing could be further from the truth. I used Tamiya's new decal solution to get these decals to snuggle down over details, and it worked perfectly. The decals went over weld detail perfectly, and on the rear of the superstructure went over a pistol port without cracking or tearing.

#### WEATHERING

To kick off the weathering process, I dry-brushed the model with some Vallejo Reflective Green. Dry-brush you say? Yes, I know its unfashionable to dry-brush your model these days, but done selectively and with a gentle hand, it can still be a great technique for carefully fading out panels, and adding some slight definition to edges and details. It is certainly more subtle and realistic than some of the other 'modulation' techniques out there! I used oil paints to add age and weathering to the paintwork. First I applied some random dots and streaks with tan and brown coloured oils, then blended these in with a brush moistened with thinners. Its best not to get this done in one big go, rather apply this technique over the course of a day or two, allowing the previous application to harden. I applied successively heavier layers of oils to the lower hull area, as the photo of the real thing shows the tank to be practically white from dust.

Mid way through weathering the model I came across some new Tamiya diorama texture paint. I know this is sounding like a massive advert for Tamiya products but truly it is not meant

to be. It is just that Tamiya stuff works every time, as designed, and is dead easy to use. This diorama texture paint comes in varying finishes. I used the grass one and a soil one. I applied the paint randomly to the hull undersides, building up more texture and mud detail behind the running gear. Straight from the bottle this stuff is lurid green and tan, so once dry I over sprayed the lot with a coat of Tamiya Buff. From there, successive layers of oil paints, blended as before, washes and a final light dry-brush finished off the weathering on the lower hull. One last thing was to add some metal sheen to the road wheels, idler, return rollers and drive sprocket. For this I used Citadel Miniatures Bolt Gun Metal. This is an acrylic paint that has the most incredible, but in-scale metallic sheen. I brushed this on carefully to areas that would come in contact with the tracks.

#### DETAILING

The stowage was painted with Vallejo acrylic paint. Each box was painted with a different shade of brown. I used thin washes of Vallejo paints to weather the ammo boxes, and topped them off with a light dry brush. Unfortunately, the weathering process brought the colours of the individual boxes to virtually the same spot, negating my effort to add some individuality to each box! Next time I will paint them separately and glue them together later. The tarp, jerry can, tow cable and spare track link were again all painted with Vallejo paints.

The Friul tracks were painted and weathered using a product called Blacken-it. This is a solution that adds a dirty black patina to metal parts. I first soaked the tracks in white vinegar for about





Green paint on, I used Gunze paints throughout. The kit decals were used, initially I thought them too thick, but they conformed to surface detail perfectly. With big numbers on the sides like this, it looks like a NASCAR! I used Tamiya's new decal softening solution on these decals, and it worked brilliantly.



Oils were used almost exclusively to weather the model. I started off with lighter shades with tan or dirt coloured oils, building up shades of grime, specially on the lower surfaces.



I used oil washes to darken shadow areas and in panel and weld lines. The beauty of using this medium is it gives you a long time to work it to how you want it, and if you don't like the effect, it's easily removed with a brush moistened with clean thinners.



Diesel oil stains were added with a custom mix of oil paint, odourless thinner and gloss varnish. Rather than get it all in one go, this effect was built up with successive layers.



I thought I'd give Tamiya's new textured weathering paint a go on this model. Out of the bottle the colour is pretty lurid, but once its weathered and painted it looks great.



I don't like product placement images, but wanted to highlight how good this paint is. Typical Tamiya really, works brilliantly, easy to use!



Successive layers of washes, oil paint applications and some careful dry brushing really brings out the detail in the Tamiya kit, and the texture paint applied to the lower surfaces.



Using oil paints to weather the model really gives you the opportunity to subtly weather the model. You can see how the weathering graduates from heavy, behind the wheels, to light, on the glacis plate. Metal sheen on the road wheels was added using Citadel Miniatures Bolt Gun Metal paint.





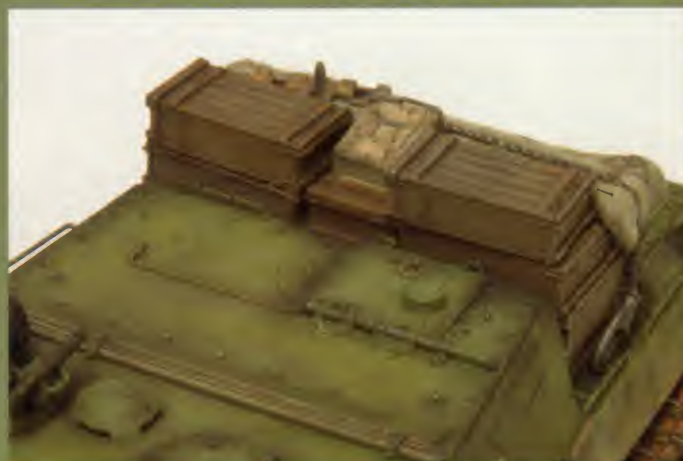
Using a mixture of grass and sand/soil textured paint adds interest and realism to the area behind the running gear. It was over painted to get rid of the gaudy colours then given the ol' wash and dry brush treatment.



Each item of stowage was picked out in a different colour, all using Vallejo acrylic paints. Careful painting of these detail items really adds the personal touch to the model.



The figure used comes from Tank. Originally destined for an IS-2 kit, he fits better here on the ISU-152 than on the JS-II.



Here you can see the subtle variation in the wooden ammo crates. Paint chips were added to the crew hatches again using Vallejo acrylic paints, and a sea sponge applicator.



The finished model. The final touch was to add a wash of heavily thinned Tamiya Buff to the tracks, this colour ties in the track colour to the weathering on the hull. By varying the viscosity and depth of application of the Buff wash, you can get real variation in the colour tones, which is what you want to achieve.





Detail items such as tool stowage and the leather strap on the hull front were painted again with Vallejos.



Subtle paint chips were added with Vallejo acrylics and topped off with 2B lead pencil to show metallic wear. Inspection hatches on the hull rear got a lot of attention when weathering.



The stowage on the hull rear adds the human touch to the model, avoiding the dull green monster look!



Areas of wear and crew movement got heavier weathering treatment. There is no point adding chips to areas that wouldn't get wear and tear. Hatches, handles and edges copped the heaviest weathering.

◀ 6 hours to remove finger print oils and any mold release agent, then dumped the tracks into a plastic container with the Blacken-it. No, I didn't use the wife's good Tupperware! I ensured the lid was well and truly on, and turned the container around a few times to get the Blacken-it into all the nooks and crannies of the tracks. This stuff is amazing, literally before your eyes the tracks go from bright silver to dirty black brown. After about 10 minutes, I pulled the tracks out of the container and ran them under cold water. I then added shine to the tracks by rubbing them with some graphite, concentrating on where the road wheels touch the tracks, and where the tracks touch the ground. Once the tracks were applied to the model, I applied a wash of heavily thinned Tamiya Buff. By varying the depth of the application, and how much thinner was added to the wash, you get some real variation in the colours of the track. This buff wash also ties in the weathering colour of the hull and the tracks.

To finish off the weathering process, I went nuts adding paint chips, scrapes and wear. As

evidenced by the missing fenders, this vehicle had seen a fair bit of action, so it was fair to assume the paintwork would be chipped and worn to a certain extent. I used a makeup sponge and some Vallejo German Camouflage Black Brown to apply chips around hatches, handles and edges of armor plate, concentrating on areas that logically the crew would traffic, moving on or around the vehicle. I have seen some chips added at the most random of places, there is no point adding paint chips in areas that wouldn't be chipped or worn. To top off these brown

Little things like painting the spare tracks in slightly different colours again add interest and variation in the model.

chips, I added some highlights with a 2B pencil. These pencil chips represent fresh scrapes and scratches, and catch the light in certain angles.

#### FINISHING OFF

To top this model off, I added a figure from the Tamiya range. This crew commander was supposed to be an IS-2 commander, but try as I might, I couldn't get him to fit in the Tamiya IS-2. However, he fitted perfectly in the ISU-152! I replaced his Soviet binoculars with a pair of German ones, and painted them Dark Yellow accordingly. His face

and hands were painted with oil paints, and his leather jacket was painted with Vallejo Flat Black. I rubbed by finger all over the jacket to get that leathery sheen.

This is a wonderful model from Tamiya, as we have come to expect. Thanks to Brett for giving me the opportunity to paint and finish this kit off! ■

### Modelspec

Tamiya 1:35 scale Russian JSU-152 Kit No. 35303

#### Paints used

GUNZE Sangyo  
H20 Flat Clear, H303 Green, H340 Field Green, H406 Chocolate Brown, H422 Light Green.  
Windsor and Newton  
Raw Umber, Lamp Black, Titanium White, Yellow Ochre, Vandyke Brown, Naples Yellow  
Vallejo  
70819 Iraqi Sand, 70995 Black, 70822 German Camo Black Brown, 70983 Flat Earth, 70981 orange brown, 70890 Reflective Green.

- ✓ Ease of build. Great looking model straight from the box. Choice of rubber band or link and length tracks. Photo etched grills included.
- ✗ Previous builder used too much glue!

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Rating ●●●●●●●●○







The Chinese ZTZ-99A Main Battle Tank.

## ZTZ-99A MAIN BATTLE TANK

by Stuart Ransley

**T**he ZTZ-99 or Type 99 is the culmination of the Chinese Army's third generation Main Battle Tank programme. Development commenced in the late 1970s and encountered many problems, with the programme stopping and starting a number of times. The Gulf War of 1991 made the Chinese Army realise that the current programme was still way behind Western designs such as the M1A1 and Challenger 2 and as a result the ZTZ-98 or Type 98 was produced. This was first revealed during the 1999 October National Day Parade. The ZTZ 98 was further improved with new armour protection and a new power plant in 2000. The new vehicle entered service with the PLA with the designation, ZTZ-99 in late 2001. Further design and update work has been carried out producing the ZTZ-99A.

The ZTZ-99A appears to display a combination of Russian and Western influences in its design. The hull has the appearance of a T 72, although it is approximately one meter longer. It is of a conventional layout with the driver's compartment at the front, the fighting compartment in the centre and the engine compartment in the rear.

The hull is fitted with six dual road wheels, two track return rollers, a drive sprocket at the rear and idler at the front. A lightweight rubber skirt protects the upper part of the track and return rollers.

The armour of the hull is of all-welded steel construction possibly with a composite layer over the top. Added to this are the explosive reactive armour modules, "ERA", which are estimated to give the equivalent of 1000 - 1200 mm of steel armour over the front

of the vehicle. The driving compartment is provided with three periscopes, with the central periscope being able to be replaced with an image intensifier for night vision.

A 1,500 horsepower turbocharged diesel engine, possibly derived from German MB871ka501 diesel technology, is fitted to the ZTZ-99A, offering a power-to-weight ratio of approximately 27.78, a road speed of 80 km/h and cross country speed of 65 km/h and can go from 0 to 32 km/h in only 12 seconds. Not bad for a 54 tonne vehicle!

The turret of the ZTZ-99A betrays obvious Western influence in its appearance, with the arrow shaped modular armour panels on the turret front and rectangular shape overall. But internally the layout of the turret shows Russian influence due to the 2A46M Russian designed auto loading system. This system makes the tank vulnerable to catastrophic fires if the armour is penetrated in combat. This is due to the way the ammunition is held in the fighting compartment. The use of an autoloader reduced the crew from 4 to 3 - Commander, Gunner and Driver.



Front side view. The Chinese tank's hybrid Soviet and Western heritage is quite clear.





Rear three-quarter view. Note the large drive sprockets and prominent rubber track pads.

## ARMAMENT

The ZTZ-99A is fitted with a Russian designed 125mm smooth bore gun and is fitted with a thermal sleeve and fume extractor. It has the following ammunition types of which a total of 41 rounds are carried:

- APFSDS (Armour Piercing Fin Stabilised Discarding Sabot).
- HEAT (High Explosive Anti Tank).
- HE-FRAG (High Explosive Fragmentation).

The main gun is also capable of firing the Russian designed 9M9119 Refleks (NATO designation AT-11 Sniper) Anti-Tank Guided Missile. The Refleks uses a semi-automatic laser beam-riding guidance and is effective out to 4000m. This ATGM is designed to engage armoured vehicles fitted with ERA (explosive reactive armour) and low flying helicopters. Four missiles are normally carried inside the vehicle.

The main gun and gunner's sight is fitted with a dual axis stabilisation system that enables accurate fire whilst on the move. Firing tests have shown an 85% first round hit probability on a target at 2000m.

The tank is also equipped with a 7.62mm coaxial machine gun in the turret and a 12.7 mm Anti-Aircraft machine gun on the turret roof.

## FIRE CONTROL

The ZTZ-99A is fitted with a computerised fire control system, which is used to engage targets with either the conventional ammunition or the Refleks ATGM missile. The system consists of the following:

- Digital fire control computer,
- Laser rangefinder,
- Wind sensor,
- Gun mount slope sensor,
- Turret movement sensor,
- Gun control mechanism.

The system works by gathering information from the sensors and the laser rangefinder, then processing it in the digital fire control computer, which in turn generates the fire solution.

On the turret roof in front of the Commander's hatch is the Commander Panoramic Viewer. This is an independent, dual axis stabilised, day/night vision device with

a 360 degree view. It is also equipped with a laser rangefinder allowing the commander to search and engage targets directly. The gunner has a similar roof mounted day/night thermal sight/ viewer with the same capabilities. This system allows the commander to search for and begin the engagement process on a new target whilst the gunner is engaging a current target. This enables a very short reaction time - less than 9 seconds to change targets.

## COUNTERMEASURES

The ZTZ-99A is fitted with an electro-optical countermeasures suite. This is located in a box on the turret roof behind the gunner's hatch. The suite consists of a laser warning receiver and an active laser self-defence weapon. In operation the laser warning receiver detects that an enemy range finding or guidance laser is illuminating the tank. It warns the crew, then the laser self defence weapon (LSDW) is used against the source of the enemy laser. The LSDW can disrupt or damage enemy observation optics, missile guidance systems and the eyesight of the enemy gunner.

The ZTZ-99 is one of the most advanced tanks fielded by the Chinese People's Liberation Army. It provides a significant improvement in mobility, protection and firepower over older designs but it comes at a cost US\$1.9 million per unit. There are currently a few hundred in service with two elite armoured PLA regiments. ■



A good view of the central driver's position.

## References

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Andrew Judson wastes no time in building the new 1:35 scale HobbyBoss ZTZ-99 A.



Hobby Boss is adding a number of modern Chinese subjects to its catalogue, including the ZTZ-99A in 1:35 scale.

# CHINESE HYBRID

**H**obbyBoss' 1:35 scale ZTZ-99A Main Battle Tank was reviewed by Stuart Ransley in Issue 47 of Model Military International. Being a workmate and friend, he generously handed it over to me to build. Thanks Stuart!

After reading his review I was keen to have a look in the box and I was not disappointed. The sturdy box is packed with 22 sprues of well-moulded plastic parts plus the upper and lower hull, turret, a photo-etched metal fret and decals. 14 of the plastic sprues are for the individual track links.

I was happy to see that this is not an over engineered model and building would be quite straightforward.

Construction commenced with the lower hull, the suspension and drive line. I already liked the

kit at this stage. Everything went together so well, no fit issues or alignment problems.

After I had this all together, the instructions would have you add the tracks, but I decided to skip this step and went on to completing the lower hull over the next five stages, again with no problems at all. There are some photo-etched parts to install. These include the engine deck screens as well as some mesh bent to fit around the filter intakes. These fitted perfectly, and I used Gator glue to keep them in place.

When it came to the track guards, I assembled them but did not install them as I was still to assemble the tracks. The track guards simply slot into three locating niches per side and only require a small amount of glue.

Now for the turret, which

represents the last two stages of construction, but there are plenty of parts to assemble. Again everything just fell into place for me, including the reactive armour. At one stage I thought this may be an issue, only to find that if I paid more attention and cleaned the parts properly, and removed those pieces that I thought were locating lugs, well, let's just leave it at that.

Care needs to be taken when putting the two barrel halves together to make sure that all lines up correctly with the different edges involved. I needed to sand the centreline in order to eliminate the join seam between the two halves.

I was a little disappointed with the turret mounted heavy machine as this had a bit of flash on it. It seemed to have come from another earlier kit, but with some

care and cleaning it still came out looking nice.

Lastly, I removed the individual links from the sprues, cleaned them up a little and assembled them.

I have to admit I cheated a bit and only built just over half of each run, as most of the top will be hidden by the track guards anyway. The tracks went together really well. Tamiya Extra Thin Liquid Cement was used to keep them together. Once nearly dry, I placed the track runs over the idler and drive wheels and left them to fully set before removing them again for my favourite part.

## PAINTING

All painting of this model was done with my trusty Aztec A470 Airbrush using all acrylic paints from both Tamiya and Gunze thinned with a mixture of alcohol ▶



The engine deck grilles are all open.

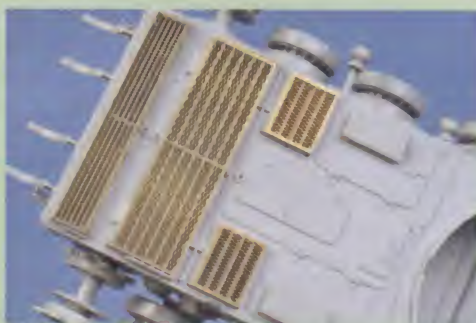


The main turret is a single-piece assembly.



Individual track links are one piece each, including the guide horn.

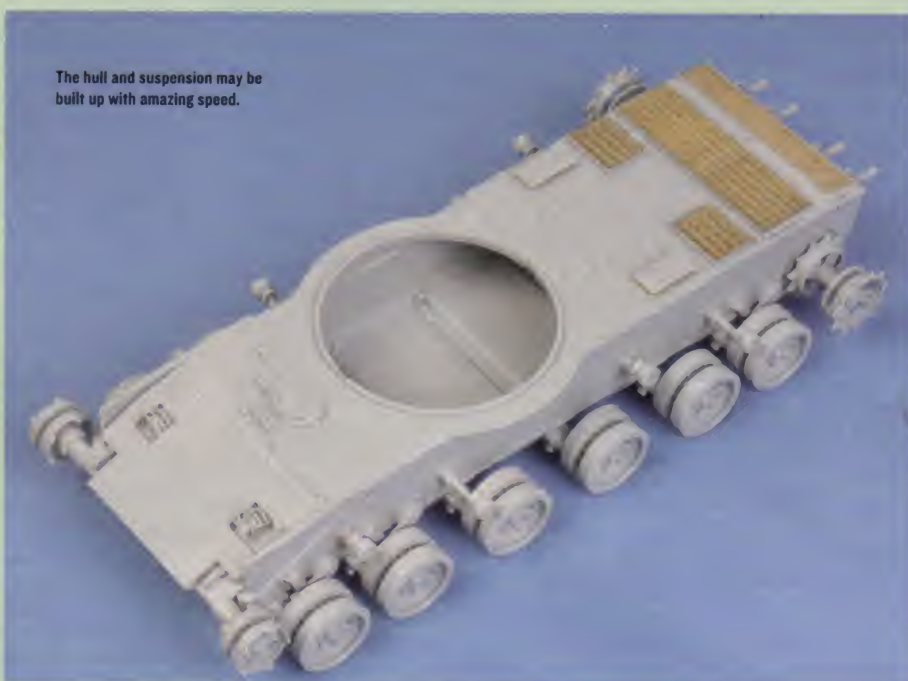




The layers of grilles and etched covers are effective.



Photo-etched mesh is even supplied for the edges of the vents – a nice touch.



The hull and suspension may be built up with amazing speed.



Headlight guards are delicate plastic parts.



The top of the track run was not completed as it is completely covered by the track guards.



The turret heavy machine gun needed plenty of TLC to approach the standard of the rest of the kit.



Assembly was a snap.  
Well, almost!





I can't see a gap in the top track run from here...



Camouflage was applied in a soft-edged finish.



The finish was kept fairly clean, with just a Mig brown wash over the surface features to add some life.

and water.

To start with, I base coated the entire kit in its sub assemblies with Tamiya XF-78 Wooden Deck Tan, followed by a lighter mix of Deck Tan and some XF-57 Buff.

Using the instruction's paint guide, I began to paint the camouflage pattern, starting with Gunze H340 Field Green, and then Tamiya XF-61 Dark Green for the darker colour. This was left to dry before applying a Mig filter for tritonal camouflage (German), which worked well for this as well.

Everything was now left to dry for a twenty-four hour period before going on with the finishing stages.

With everything nice and dry I applied the decals using Gunze Mr Mark Softer, followed by a heavily thinned coat of Citadel Sepia Wash over the top. This blended everything together as well as flattening down the sheen of the decals. Lastly I applied a pin wash over all the surface details using Mig Brown Wash and a very fine brush. This just adds so much more life to the kit.

The heavy machine gun was painted with Gunze H76 Burnt Iron with a black wash, followed by a light dry brush of Citadel Silver to top it off.

Lastly, the tracks were painted

**“I cheated a bit and only built just over half of each run, as most of the top will be hidden by the track guards anyway.”**



A heavily thinned coat of Citadel Sepia Wash tied the paint job together.



Hobby Boss' 1:35 scale ZTZ-99A was a very straightforward model to build.



## Modelspec

HobbyBoss 1:35 ZTZ-99 A Main Battle Tank  
Kit No. 82439

### Materials

Testor Aztek A470 airbrush, Graphite powder.

### Paints used

Tamiya Acrylics, Gunze Acrylics, Citadel Sepia Wash, Mig Productions Filter for Tri-Tonal Camouflage (German), Mig Productions Brown Wash.

✓ Interesting subject; excellent fit; easy build; separate track links; includes useful photo-etched parts.

✗ Turret mounted machine gun not to the same high standard as the rest of the kit; open engine deck grilles but nothing underneath.

### Available from

Thanks to Creative Models Limited for the sample  
[www.creativemodels.co.uk](http://www.creativemodels.co.uk)

Rating ●●●●●●○○

in a 50/50 mix of Tamiya Flat Black and Red Brown, followed by a wash of Mig filter of Brown for Grey that imparted a lightly used look, and finally graphite powder from my gun cleaning kit, rubbed over the raised edges and the sides of the tracks.

The only thing I had to do now was paint in the glass panels. Using photos of the real thing as reference, I did this using Silver as a base coat and then a couple of

coats of Transparent Blue over the top. Some Clear Orange and Red in the tail lights and all the painting was finished. Now I glued the tracks onto the kit, same for the track guards and it was complete.

As you can see, weathering was very minimal indeed, because all the photos I have of this beast show it on parade, all shiny and clean.

### CONCLUSION

I found Hobby Boss' 1:35 scale

ZTZ-99A was an excellent model to build. I really enjoyed it, and if you like modern AFVs and are looking for something a bit different, then grab one. You won't be sorry.

If you are really up for a challenge you might even consider the digital camouflage on the newest version, the ZTZ-99B!

Again thanks goes to Stuart for the passing on of this kit and also the reference pics he provided. ■

## LISTEN UP :

# It's time for a lesson from the master.



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# THE ROTTEN RED FENCE

Jose Brito places CMK's 1:35 scale LT vz.35 light tank in Operation Barbarossa.

**A**t the end of 1934, the Czechoslovakian army defined the specifications to produce a new tank. Several companies started design and construction of a new model. In the end, the winner was the entry from the Skoda factory. The vehicle presented was very modern for its time and was quickly adopted by the Czechoslovakian army as a standard light model. It was one of the best tanks in its class and was designated as LT vz.35.

A total of 298 tanks were

ordered and the first entered service in 1936.

After the Munich Agreement in 1938, the Czechoslovakian army lost the interest in acquiring new armament and even considering the sale of the military material, including the modern Skoda LT vz.35. The relationship between Czechs and Slovaks was not very peaceful and the Munich Agreement resulted in their separation. With the disintegration of their country, the Slovaks took the opportunity to create an independent state, led by pro-

German Jozef Tiso.

With their occupation of Czech territory, the Germans took possession of 244 Skoda LT vz.35 tanks. The Slovak state took 52 and Hungary another two. The Germans promptly introduced the Skoda into their ranks and the model was renamed Panzer Pz.Kpfw. 35(t) in Wehrmacht service. The tanks were used in the Polish and French campaigns. The Germans were still using the Panzer Pz.Kpfw. 35(t) during Operation Barbarossa, the invasion of the Soviet Union, but this time in

fewer quantities.

In total, 298 LT vz.35 were produced for the Czechoslovakian Army, 128 for the Rumanian Army and 10 for the Bulgarian Army.

## CMK'S 1:35 SCALE LT VZ.35

CMK's 1:35 scale LT vz.35 is very nice - good detail, good plastic, good instructions and good decals. The box is not so attractive, but the quality is inside and that is what really matters. My model also included two nice resin figures for the crew. This is the "upgraded kit" package. The figures are fine,





The quality of moulding and detail is very good indeed.



Construction started, unsurprisingly, with the running gear.



Plastic Magic glue was applied with the Pin Flow, reaching all the most inaccessible places. This is very thin glue applied with a fine metal tube.



A selection of adhesives from the Deluxe range were used for the project.



RMG's copper tow cable was used to enhance the kit.



The copper tow cable was draped naturally across the rear of the hull.



The kit tracks are probably the weakest aspect of the kit, so they were replaced with metal items from Friul Model. Each individual metal link was drilled out to accept the wire "track pin"...



...before assembly in a vise, acting as a jig.



Rocket Hot super glue was used to secure the wire pins. If done carefully, the tracks will remain fully workable.

but the facial expressions are not so good.

The instructions provide information to choose between five different versions.

In my opinion one of the weakest parts of the model are the tracks. They do not match the overall quality of the kit and must be replaced. The tools are also not very nice, but all the rest is state of the art. Also, most important, the kit depicts a very original subject and most of the time neglected by the big manufacturers. It was my first CMK

kit and I was pleasantly surprised. I am certain it will not be the last CMK kit that I build in the near future.

### CONSTRUCTION

In common with most of my models, construction started with the running gear. The fit is great and the construction very straightforward. I made several subassemblies for the suspension and wheels. I also followed the instructions that are very clear, and had no nasty surprises. I had the chance to try, for the first time,

the excellent glues from Deluxe Materials and they are great. They have several different glue solutions according our needs and type of material we are dealing. Applying the Plastic Magic glue with the Pin Flow is a real breeze and the glue can reach all the most complicated places. This is a very thin glue applied with a fine metal tube. It is just great to work with.

As mentioned earlier, one of the weakest part of the kit is the plastic tracks. They are inaccurate and the best solution is replacing them. As usual, the first choice

is Friulmodel - what else? They produce a great range of metal tracks and like they are in metal, they always look awesome. The sag is natural and very convincing. Most of the time they can be the difference between a masterpiece and a mediocre model.

### PAINTING

Before installing the tracks I airbrushed the entire model with thin coats of Tamiya XF-10 Flat Brown. As usual, paint was applied with my best friend, the Testor Aztek 470 airbrush. ►





Plus Model's fine lead wire was twisted to represent light tow cable.



The Frui tracks make a huge impact on the model. The obvious weight and natural drape look fantastic.

I wanted a used and battered look for my model so I placed several scratches and chips. I replaced the iron cable with an item from Portuguese company RMG, item RM016, Cooper Tow Cable for AFV. This looks much better than the plastic one provided in the kit. The cable holders were also made by scratch with small photo-etched parts. The rucksacks and canvas were made in Magic Sculp and left to dry for about 24 hours. Normally, I roll a sheet of Magic Sculp and then cut it to the desired shape. Then I place the sheet over the model and with a toothpick I start shaping it until I get the result I am looking for. Once dry, the Magic Sculp is rock hard, can be sanded and painted. It also looks very natural and realistic. Some cables were also added from Plus Model's 0.2mm twisted lead wire.

At this point it was time to

install the Frui model tracks and some synthetic grass mixed with Vallejo Plastic Putty 400. Everything was left to dry overnight. Once everything well dry, it was time for another coat of thin Tamiya XF-10 Flat Brown, followed by a thin coat of Tamiya XF-59 Desert Yellow. I like to apply very thin coats in order to maintain and keep all the surface detail. The coats must be fully dry before we apply another one.

Now, the best part was about to begin, the camouflage painting. Let me tell you this was a very challenging process. The three colour camouflage was a real test to my patience, because this vehicle is not very well documented and according to my research there were several different camouflage schemes, so at a certain point I found myself relying on the instructions. According the information I

gathered, the instructions seem to be very accurate. The different colours were painted with acrylics from Vallejo. They are the ideal paints for this kind of work. The camouflage pattern was hand draw over the entire model with a soft pencil and then brush painted with acrylics from Vallejo. I did not use any masks and the entire pattern was brush painted. I also used Vallejo brushes. When combined with their paints, the paint process is very straightforward. The paints dry very fast and in a short time the entire camouflage was painted.

Soon it was time to apply the decals. This was my second experience with decal solutions from Vallejo and I am very satisfied.

I cut the decals and dipped them into water. While the decal is in the water, I apply a small quantity of Vallejo Decal Fix where the decal will be placed. Vallejo Decal Fix, as the name suggests, is a decal

solution that will improve the adhesion of the decal. It is applied by brush then gently, the decal is placed in the model and over the Vallejo Decal Fix. We remove the excess water and once the decal is dry, it is brushed with Vallejo Decal Medium. Vallejo Decal Medium is a decal softener and will almost destroy the decal, but don't panic. Once the decal is in place and Vallejo Decal Medium applied, don't touch it! Let the product do the entire job. The decal will look awful while it is drying but in the end will look fantastic. I was amazed by the results. Next day the decals looked like they were painted onto the model. All the detail was there. From now on, Vallejo decal solutions are my choice when it comes to applying decals. They just need a thin coat of matt varnish to seal and protect them. In this case I used Vallejo Model Air 059 Matt Varnish.



Magic Sculp tarps and a flag were cut to shape and persuaded to sit over the contours of the upper hull and track guards.



The folded and draped tarps and flag look very convincing.



The large flag was painted with a base coat of Tamiya XF-2 Flat White with the Testor Aztek A470 airbrush.



The white circle was masked with the aid of a template and a sharp hobby knife.



The entire flag was sprayed and the masked circle removed, revealing the all-white centre spot.



The Swastika decal was sourced from a Fantasy Printshop sheet.





Painting gets underway with an overall coat of Tamiya acrylic XF-10 Flat Brown. Even the tracks get the treatment.

This was followed by another overall coat of Tamiya XF-59 Desert Yellow, but not quite as thorough as the Flat Brown.

Now Vallejo acrylic paints were used to apply the complex camouflage pattern.

## WEATHERING AND FINISHING

The first step of the weathering and finishing job was airbrushing very thin coats of the camouflage colours lightened with Tamiya XF-15 Flat Flesh. This gives the colours a bit more of a faded and natural appearance. I also applied hundreds of small scratches over the surface in the most logical places where the crew stand or walk and in the places with heavy usage. The scratches were made with a brand new very fine brush. I used the same Vallejo colours used in the camouflage, but this time lightened with Vallejo Model Color 928 Light Flesh. This is a time consuming process, but very important for the realistic final look. I needed around 5 or 6 hours

to apply all the scratches over the entire model.

Once everything was perfectly dry, the entire model received a wash of Winsor & Newton oils mixed with Winsor & Newton Sansodor (low odor solvent) and Vallejo Wash, in this case the 73200 Sepia Shade and 73201 Black Shade. This is my second time with Vallejo washes and they are awesome. They dry very fast and they combine well with oils, which take much more time to dry. Vallejo is releasing some great products and their washes are one of the best examples.

At this point the model was left aside to fully dry the oil wash. During this period I started the base, but let's travel through time

instead and continue with the weathering and finishing. Once the oil wash was dry it was time for the pigments.

Vallejo's pigments may be combined with other brands, and their pastel powders are presented in a huge variety of colours.

The best approach for wet mud is mixing the Vallejo pigments with their Glaze Medium 70596, which is an acrylic resin. It also can be mixed with water.

I picked several colours and started mix them until I get a nice mud colour. Then the "mud" was applied over the tracks, running gear and lower hull. We must be aware that for a realistic final look we need to have a colour variation. The mud is not all the same colour

and we must represent fresh and old mud.

While the wet mud in the lower parts was drying, the top of the model received the dry pigments directly from the jar. They were placed in the most logical places, like the recessed areas, tools, near the hatches. To fix them in place I just applied small drops of Winsor & Newton Sansodor. Take care to apply small drops over the pigments, not pass the wet brush over the pigments! The drop over the pigments will turn them very dark, but once dry the pigment will look like real dust and very realistic. Once again, the colour variation is very important. We must use several colours in order to achieve a realistic and natural finish. ▶



Vallejo's Decal Fix and Decal Medium were employed to excellent effect. Here are some of the tools of the decaling trade!



First the markings were carefully cut from the decal sheet.



The individual markings are dipped briefly in water. Don't let the decals soak for too long.



Finally, the decals are applied to the glossy surface with tweezers.



Decal Fix is a setting compound, while Decal Medium is a hot softener that will help the decals sit down over even extreme structural surface detail.





A range of products were used for weathering including Winsor & Newton oil paints mixed with Sansodor thinners.



Vallejo pigments were used to dirty up the suspension. These were mixed with a resin glaze medium for substance. Pigments were also used on heavy traffic areas on the upper surfaces. These were applied dry, then fixed with a spot of Sansodor thinner.

### BASE AND DISPLAY

I am a diorama builder and all of my models are displayed on a base. In my opinion a base and surrounding environment can tell a lot about our model. We can see if it is winter or summer; if it is in the country, city or village. The observer can glean much more information about our model if the model is in its natural environment. School students and the general public visit most model shows so our models also fulfil an instructional role. This is not only a hobby but a legacy for the next generations. Our models are like history classes and the public can learn a lot from them.

As usual, I used a timber base framed with balsa wood. The interior is filled with insulation foam. The insulation foam is easy to find in hardware stores. It is lightweight, easy to cut and cheap. It may also be worked to almost every groundwork configuration.

The balsa wood was glued to the wood base with Deluxe Materials Rocket Max, a non-runny cyano glue that takes about 10-20 seconds to bond. This bond time it's great to fix the balsa in the correct place. With normal cyano glue this would be impossible because the fast bond time would make it impossible to place the balsa in the correct position.

The Rocket Max bonds the balsa firmly in place and it is almost indestructible. The insulation foam was glued in place with normal wood glue.

The joints formed by the balsa walls were filled with Tamiya Putty Basic Type applied with a small spatula.

From the beginning, my idea was to represent the vast Russian landscape, so for the first time in several months I made a flat diorama. Seeing as the diorama will represent the first stages of Barbarossa Campaign I decided to make the vegetation look like spring. For that I used, for the first time, the Model Scene item F509,

Low Bushes Autumn. Although it is entitled autumn, it is very suitable for a spring look. This product is like a carpet and all we need to do is cut it into the desired shape and glue it over the base. Simple as that! Once in place it looks ultra natural. In fact this was a great idea from Model Scene.

I also decided to use a wooden fence from The Model Scene range. The fence is produced in real wood and looks great. I airbrushed the fence with Tamiya XF-7 Flat Red and then I just weathered it to look old and beaten. The weathering was applied with the "normal" approach and with oils, acrylics and pigments. All of them combined ►



The resin figures supplied were both nice, but there was simply no space in my scene for the seated crew member.



The heads were replaced and the figures primed with Tamiya XF-19 Sky Grey.



My single figure lost in a field of Model Scene item F509, Low Bushes Autumn.



The head was kept separated from the body until the final stages. The head and body was first painted Tamiya XF-7 Flat Red...



...and then Tamiya XF-15 Flat Flesh.



Vallejo acrylics were used for the clothes, accessories and oils for the flesh areas.





The base was started in the usual fashion, with a wooden base and balsa wood sidewalls. The balsa wood was glued to the wood base with Deluxe Materials Rocket Max, a non-runny cyano glue that takes about 10-20 seconds to bond.



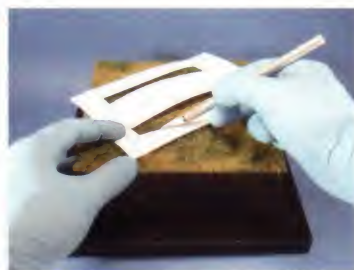
Unusually, this time the base would be flat. The insulation foam was glued in place with normal wood glue and lines up with the top of the balsa wood sidewalls.



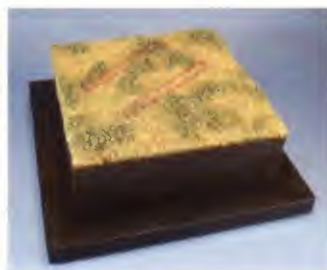
The joints formed by the balsa walls were filled with Tamiya Putty Basic Type applied with a small spatula.



The groundwork was a simple sheet of Model Scene item F509, Low Bushes Autumn. This looks great even without any enhancement.



Before further work, the grass mat was prepared with the aid of a paper mask. This was a guide to cut out the location of the tracks.



The modified grass mat.



Staining and weathering has been added to the new depression, and to the area directly aft of the track marks.

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The wooden fence was a real wood product from Model Scene.



The first step was to paint the wooden fence with Tamiya XF-7 Flat Red.



The fence was rubbed back, then treated to additional weathering with oil washes and acrylic paints.



The result is a convincingly dirty old red fence.



The position of the fence was checked before going any further.



Small tufts of vegetation from Model Scene were placed in the most logical places with the help of Rocket Rapid super glue.

Pz. Kpfw. 35 (t) / Skoda LT vz. 35. Fast Brigade "Pilfousek", Vinnitsa sector, Ukraine, July 1941.

CMK's 1:35 scale LT vz. 35 can be turned into a great model and displayed in a nice scene with lots of character.

The rotten Red fence is a metaphor for the state of the Soviet Union in the summer of 1941.







make the fence look like it had been abandoned for several years. Once done, the fence was glued in place with Deluxe Materials Rocket Max glue.

I decided to paint the fence in Red as a symbolic point. My idea was that the red fence represents the Russian (red) defences. In the early stages of Barbarossa, the Germans and their allies easily crushed the Soviet opposition. The wrecked fence would therefore represent those defences and their ineffective response.

With the fence in place, small

vegetation tufts from Model Scene were placed in the most logical places once again with the help of Deluxe Materials glue solutions, in this case Rocket Rapid.

With the fence in place and the terrain done, it was time to glue the model to the base.

My model represents a tank from the Fast Brigade "Pifousek", which fought in the Vinnitsa sector, Ukraine, July 1941.

#### FIGURES

The kit provides two very nice resin figures. The casting is very good and the poses quite natural. The weakest aspect is, in my

opinion, the heads and their facial expressions. My initial idea was to use the two figures, but soon realized that I had no space for both. The one in seated position just would not fit anywhere.

The figures were primed with Tamiya XF-19 Sky Grey airbrushed in thin coats to retain the surface detail. Once well dry, the only figure I planned to use was airbrushed with Tamiya XF-7 Flat Red and then Tamiya XF-15 Flat Flesh. Then I painted it in my usual fashion - Vallejo for the clothes, accessories and oils for the flesh areas. The head was kept separated from the body until the final stages, just for an easy painting process.

In the end, the figure was placed

## Modelspec

CMK 1:35 Skoda LT vz.35 / Pz.Kpfw. 35 (t) Item No. 35006

#### Items used

1:35 RMG Resin Models, Cooper Tow Cable for AFV (RM016), Model Scene, Low Bushes Autumn, (F509), 1:35 Model Scene, Wood Fence, Friulmodel tracks, Pz.Kfz 35 (t) Skoda (ATL-31)

#### Paints and materials

Hood glue, Deluxe Materials glues, Heat isolation foam, Wood base, Injected plastic, Resin parts, Plastic card, Metal parts, Vallejo acrylics, Vallejo washes, Vallejo pigments, Tamiya acrylics, Dry Pastels, Oil colours, Aquaplast - Robbialac, Fine sand Plus Model Lead wire 0.2mm

✓ Original and interesting subject. Good surface and overall detail. Two resin figures.

✗ The plastic tracks and resin heads.

#### Available from

Distributed int he UK by Hannants ([www.hannants.co.uk](http://www.hannants.co.uk))

Rating ●●●●●●●●○

near the tank to contemplate the infinite expanse of the Russian countryside.

#### CONCLUSION

This was my first CMK kit. It was a good experience and I am very happy with the quality. Detail is high, the kit is accurate and with two resin figures the package represents great value of money. In my opinion the weakest parts are the plastic tracks and the figures' resin heads.

This kit can be turned into a great model and displayed in a nice scene with lots of character and symbolism.

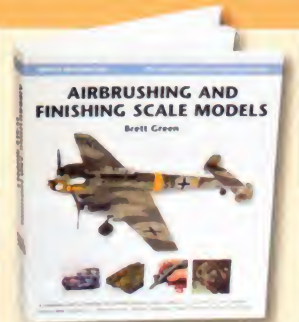
I would like to express my appreciation to everyone who helped out with this project. ■

**“Detail is high, the kit is accurate and with two resin figures the package represents great value of money.”**



The Author at his workbench.





This is an adapted serialisation of the Osprey Masterclass book, "Airbrushing and Finishing Scale Models" by Brett Green, ISBN 978 1 84603 199 1. This hard-cover, ring-bound book is available online from Osprey Publishing at [www.ospreypublishing.com](http://www.ospreypublishing.com)



This is Chris Wauchop's 1/35 scale AFV Club Centurion Mk.5/1, kit number AF-35100. The model represents a vehicle from the Royal Australia Armoured Corps in Vietnam, in service with C Squadron, 1 Armoured Regiment.

# FINISHING SCHOOL

## PART SIX – PAINTING SINGLE COLOUR CAMOUFLAGE FINISHES

This installment offers some suggestions on how to lend interest to single-colour camouflage finishes using a variety of techniques.

**W**hen I first returned to modelling, I thought that the most challenging finishes were multi-coloured and mottled schemes. Although these certainly require technical skills and practice, once the basic colours are on the model, they tend to lend interest to the vehicle thanks to

the complexity and variety of the scheme itself.

These days, I believe that the most rewarding yet most challenging camouflage is a scheme comprising a single colour.

This month, master modeller Chris Wauchop shares some tips on lending variety and interest to single colour camouflage finishes.

### CENTURION

Chris Wauchop built AFV Club's 1/35 scale Centurion Mk.5/1, kit number AF-35100

The model represents a vehicle from the Royal Australia Armoured Corps in Vietnam, in service with C Squadron, 1 Armoured Regiment.

A combination of somewhat vague instructions and tricky fit of

parts led to a fairly lengthy build time, but the results were worth the effort.

All camouflage colours were applied with the Testor Aztek A470 airbrush.

The overall camouflage green is a mix of equal parts Tamiya acrylic XF-62 Olive Drab, XF-58 Olive Green and XF-49 Khaki, plus a



▲ A single colour camouflage finish need not be monotonous. Careful application of weathering over the base coat of airbrushed colour will lend variety and interest to the overall colour.



▲ The overall camouflage colour here is a mix of equal parts of Tamiya acrylic XF-62 Olive Drab, XF-58 Olive Green and XF-49 Khaki, plus a dash of Gunze-Sangyo H312 Green FS 34227.



A protective coat of Tamiya X-22 Gloss Clear was sprayed over the base colour to protect the paint job from the subsequent wash. The wash was a mix of Tamiya enamel X-18 Semi-Gloss Black and XF-64 Red Brown in equal parts, thinned with mineral turpentine. This mineral wash did not damage the acrylic paint beneath. ▶



The entire model was then covered with Vietnam red dust. This was a heavy coating of various pastel chalk colours, ground down and mixed with turpentine then painted onto the model. When dry, the dust was scrubbed off with a soft toothbrush. The result is dust in the crevices, with a fine reddish effect overall. This method of application is also very robust and can withstand handling without rubbing off the pastel.



dash of Gunze-Sangyo H312 Green FS34227.

The inner wheel rims moulded to the vinyl tyres were painted green using a fine brush.

Wooden tool handles were painted XF-59 Desert Yellow.

A coat of Tamiya X-22 Gloss Clear was sprayed over this base colour to protect the paint job from the subsequent wash. This wash was a mix of Tamiya enamel X-18 Semi Gloss Black and XF-64 Red Brown in equal parts, heavily thinned with mineral turpentine.

The entire model was then covered with Vietnam red dust. This was a heavy coating of various pastel chalk colours, ground down and mixed with turpentine then painted onto the model.

When dry, the dust was scrubbed off with a soft toothbrush. The result is dust in the crevices, with a fine reddish effect overall. This method of application is also very robust and can withstand handling without rubbing off the pastel. ▶



This is Chris Wauchop's 1/35 scale Dragon T-34/76 Model 1941, kit number 6205. Chris wanted to finish this single-colour model similar to Marcus Nicholls' striking T-34 that appeared in Tamiya Model Magazine Issue #106.





# Tech Guide - Airbrushing and Finishing Scale Models



▲ All camouflage colours are water based acrylics thinned with Isopropyl alcohol and applied with the Testor Aztek A470 airbrush fitted with the fine tan tip. First, a coat of overall green was applied. This was a 50/50 mix of Gunze Sangyo H303 Green and Tamiya XF-2 Flat White.



▲ Next, paint "scratches" were applied using a 50/50 mix of Tamiya XF-64 Red Brown and XF-24 Dark Grey, plus a dash of XF-1 Flat Black.



▲ This was followed by an overall coat of Future, also applied with the Testor Aztek airbrush. This resulted in a slight overall sheen prior to the next step.



▲ The model received a selective application of "mud" over the coat of Future, made from various colours of powdered pastel chalk mixed with Mineral Turpentine into a damp slurry. This muddy mix was applied with an old paintbrush. The tracks and wheels received a heavier coat of this scale mud.

## ◀ T-34/76

Chris also built 1/35 scale Dragon T-34/76 Model 19421/35 scale Dragon T-34/76 Model 1941, kit number 6205.

The model was built by Chris Wauchop on commission. Chris's client wanted the model to look like Marcus Nicholls' striking T-34 that appeared in Tamiya Model Magazine Issue #106..

All camouflage colours are water based acrylics thinned with isopropyl alcohol and applied with the Testor Aztek A470 airbrush fitted with the fine tan tip.

Chris's technique for producing a Marcus-Nicholls-like finish was as follows:

First, a coat of overall green was applied. This was a 50/50 mix of Gunze Sangyo H303 Green and Tamiya XF-2 Flat White.

Next, paint "scratches" were applied using a 50/50 mix of Tamiya XF-64 Red Brown and XF-24 Dark Grey, plus a dash of XF-1 Flat Black.

Now the model was given a thin coat of Future (Johnson's Kleer). When this was dry, the model received a selective application "mud" made from various colours of pastel chalk mixed with Mineral Turpentine.

When this was dry, a fair bit of careful removal and application took place until I was happy with the result.

After a lot of fiddling around, adding extra mud, scratches and stains, a very satisfactory result was achieved. ■



▲ Once the mud had dried, the colour was significantly lighter. The mud was selectively and carefully scraped and rubbed off in areas until Chris was happy with the result.

**“These days, I think that the most rewarding yet most challenging camouflage is a scheme comprising a single colour.”**





# CHERBOURG 1944

## PART ONE

Justo Mira presents a step-by-step illustrated guide to building a 1:72 scale diorama of the French port of Cherbourg.

**A**fter the D-Day landings at Normandy on June 6, 1944, all the Allied supplies were disembarked on the beaches via temporary jetties called Mulberries. These were partially completed in the weeks following the landings. On June 19, a savage storm wreaked havoc on the English Channel over a period of four days, damaging the two Mulberries and running around 700 light vessels aground. The rhythm of landing supplies decreased dramatically at this critical point of the invasion. The American Mulberry was so damaged that its repair was abandoned.

On June 18, Montgomery ordered the Americans to take Cherbourg, still in hands of the Germans. This was the most important port in the area, where the Allies hoped to be able to disembark some 150,000 tons of supplies in four weeks. The Cherbourg stronghold surrendered to the VII Corp on June 26. The port resisted one day longer, but it was destroyed so thoroughly by the Germans that it could not be used in a useful way until the end of September.

### BUILDING CHERBOURG IN MINIATURE

#### THE BASE

The base was made from particleboard (76 x 36 cm) and plywood. I placed expanded polyurethane in the base to represent the crater. The shape of the crater was formed with a knife.

#### THE RAILWAY TRACK

To begin this big job I bought a railway track in HO scale.

I placed it on a photocopier and scaled it up to 1:72. The width should be the same as the railway track from MIG productions. The sleepers were scratch built from plastic strip.

#### THE METAL RAILWAY BRIDGE

The first step for the bridge was to make a drawing in scale, which served as a pattern.

The bridge was built using angle strips from Evergreen. The "T" strips are from another type of plastic. For this reason I reinforced the bond with super glue.

#### BUILDING

The big building's walls were made from Stucco. The bricks were sculpted on the surface with a punch.

Evergreen plastic was used to make the corrugated roof. The doors and windows were also made from the versatile Evergreen.

#### BRICK WALLS

The brick walls were mastered in several pieces, which were then copied in resin. One of the copies is made of stucco, where damage from an explosion was replicated. These parts are also available commercially from Mig Productions.

#### ACCESSORIES

I saw a photograph of mines being used in Cherbourg harbour, so I decided to use them in my scene. I estimated the size of the mines from the photos and made them from scratch. I thought it would be interesting to load a rail car with these. The width of the boxcar is equal to two mines. ■





▲ HO sized railway tracks were scaled up on a photocopier and sleepers cut from Evergreen plastic strip.



▲ These railway tracks are now available from Mig Productions, so you will not have to go to this much trouble!



▲ The base was made from particleboard and plywood. A mock-up of the building was put in position to help with the configuration of the diorama.



▶ A hole was left for the crater, which was formed with clay over a base of polyurethane foam.





# Tech Guide - SMALL SCALE DIORAMA



▲ The brick walls were mastered in plastic then copied in resin. One was copied in stucco so that it could be shown as broken.



▲ The lower walls are in plaster and resin. The plaster sections are pitted with shrapnel and bullet fragmentation.



▲ The overhead railway bridge was first drawn onto graph paper.



▲ Various sizes and profiles of Evergreen strip were cut to the shape of the pattern and glued together to form the complex bridge.



▲ Here is the bridge a little further down the construction track, in place over the railway line.





▲ Balsa and plastic strip were cut to size for the structural elements of the building.



▲ Care is required when handling a small sharp Stanley knife!



▲ The doors of the building were cut from plastic sheet and strip.

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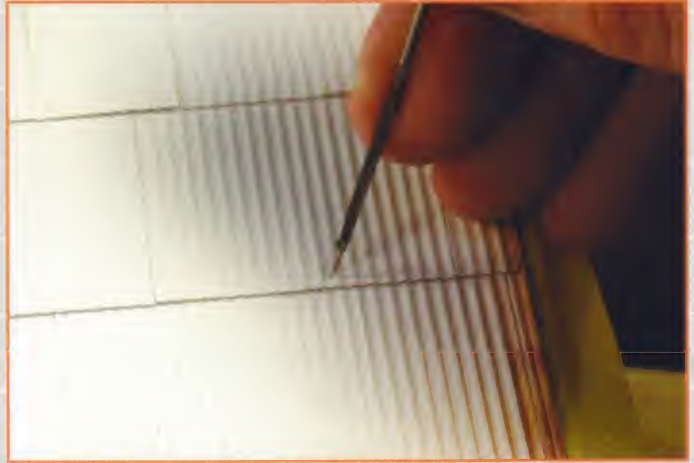




# Tech Guide - SMALL SCALE DIORAMA



▲ The individual roof ridge capping sections were cut from plastic sheet and folded to shape. The small details take time, but they greatly contribute to the overall effect.



▲ The roof was formed from overlapping sheets of corrugated Evergreen plastic. Rivets are being punched into the sheets.



▲ Note the damaged section of the roof with wooden trusses exposed. The roof ridge capping is being added here.



▲ The diorama starts to take shape. The building has been tacked together and placed on the base.



Here is the bridge being checked for position on the otherwise bare base.





# Figures - A round-up of the latest figure sets on release...



## TRUMPETER

### GERMAN s.FH 18 FIELD HOWITZER GUN CREW 1:35 SCALE • ITEM NO 00425

With Trumpeter releasing a bunch of great new German artillery kits, it is only fitting that figures should follow. This set is one of the latest and it does not disappoint. Trumpeter's 1:35 scale German s.FH 18 Field Howitzer Gun Crew comprises four plastic sprues with 182 parts to build six figures with field equipment and a full fret of ammunition.

Also included are two flexible vinyl sprues similar to the DS product by Dragon. These contain woven mats, tubular baskets their lids and charge bags. These will be perfect to populate your diorama or vignette.

This is a nice figure set and addition for any of the Trumpeter artillery kits released so far.

Highly Recommended.

Thanks to JB Wholesalers for the sample  
[www.jbwholesalers.com.au](http://www.jbwholesalers.com.au)

Andrew Judson



## ROYAL MODEL

### U-BOAT SEA MAN

#### ITEM NO. 593 • 1:35 SCALE

Royal Model has released a 1:35 scale U-Boat Seaman in a thoughtful pose. He is standing in his warm leathers, hand in pocket and holding a pipe, gazing off into the distance.

The figure is supplied in ten pieces, and is cast perfectly in pale yellowish resin. He is broken down into torso, arms, legs, boots, binoculars and the hand holding a pipe. Alternate heads are offered – one with a side cap and one with an officer's peak cap. This figure will be appropriate for an S-Boot too with a little modification, and should form the basis for some interesting vignettes and dioramas.

Thanks to Royal Model for the sample  
[www.royalmodel.com](http://www.royalmodel.com)

Brett Green



## AC MODELS

### "SNOWY" LRDG, NTH AFRICA 1:10 SCALE • ACM10B010

This is one of the latest from the very active Andrew Cairns of AC Models representing a member of a LRDG crew all covered up with a heavy jacket and head scarf to protect himself from the harsh conditions faced in North Africa. In the box are three grey resin parts, being the main bust itself, a pipe and the base. Also included is some very fine wire to make the tassels hanging off the scarf. Holes are pre-drilled on the bust to place these.

Minimal cleaning is needed to prepare this for painting, with a minor seam line running down the back of the head on the scarf. The sculpting is very nicely done, showing good expression on the face and the folds of the scarf look nice, and the way it hangs look good as well. This is a very nice bust that would make a good companion to the re-released Tamiya LRDG in a display.

Nice work from AC Models  
Highly Recommended.



## AC MODELS

### "LUCKY" CRETE 1941 1:10 SCALE • ACM10B011

Here is another new sculpting from AC Models, and I have to say up front that this is my favourite that I have seen from them. In the box are seven resin parts including the base. Some cleaning will be required, with a seam line down the back of the head from the hairline down.

The sculpting is excellent, especially the face, which to me says it all - "How lucky am I to be alive after copping that in the head!" It really delivers great expression, and the whole pose suggests a strong and unique character. Well, it is pretty obvious that I like this, and I do recommend it to all who like this subject. Well done Andy.

Highly Recommended.

Andrew Judson

Available online from Colorado Miniatures  
[www.coloradominiatures.com](http://www.coloradominiatures.com)



## SKP MODELS

### ATS DRIVER SAMANTHA IN 1:35

SKP from Czech Republic has released another fine figure. This time it is the ATS Driver Samantha in 1:35 scale. This full resin figure is sculpted in a natural and convincing pose. It is a top quality casting with great small details.

The figure is composed of four main resin parts - the head, body and two arms. Construction will be very straightforward but some minor cleaning is necessary. This figure will look very interesting standing by the new SKP or forthcoming Tamiya Austin Tillies. This figure also has a great conversion potential.

Although she is called Samantha, for some reason, this figure reminds me of a young HRH Princess Elizabeth...

Highly Recommended.

More details at: [www.skpmodel.eu](http://www.skpmodel.eu)

Jose Brito



Stuart Ransley reviews the 1:35 scale Flakpanzer IV Wirbelwind from Dragon.



Magic Track individual links are colour coded for left and right handed links.

# QUAD FLAKPANZER

The Wirbelwind was a self-propelled (SP) anti-aircraft gun system designed to provide cover for the fast moving Panzer Divisions. Production started in May 1944 and various sources quote the number of vehicles produced between 86 and 122.

This vehicle was built on Panzer IV tank hulls returned from the front for overhaul. The 75mm gun turret was removed and replaced with an open top turret mounting a quad flakvierling 38. Panzer IV hulls from F to H were used in the conversion.

On opening the box of the Dragon "Smart Kit" we find one fold out A3 size instruction sheet, 16 sprues containing

approximately 942 parts, 1 clear sprue, 1 etched brass fret, 1 pack of left hand track links and 1 of right hand track links, 1 small decal sheet and 1 length of wire.

The instruction manual is a double-sided trifold A3 sheet, which is well laid out but should be studied prior to commencing construction due to its complexity. All parts on the sprues of the review kit were crisply moulded and flash free. The hull is of the conventional tub type and is well detailed. The most outstanding feature of this kit is the Flak 38. This has to be one of the best models of this particular gun I have ever seen. The turret comes in its own little clear protective container to stop any

warping due to the scale thickness of the sides.

Tracks are of the "Magic Track" type, and modellers are advised that the left-side track links are moulded in dark grey plastic and the right are moulded in light grey.

The only thing that I think could have made this kit even better than it is would have been the inclusion of zimmerit. Most wartime photos of the vehicle show the hull with a coating of zimmerit.

This kit has to be one of the most accurate depictions of the Wirbelwind.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)



The characteristic turret is moulded impressively thinly.



The 20mm guns are moulded with hollow muzzles.



Ammo is provided!



Five interesting camouflage schemes are suggested.

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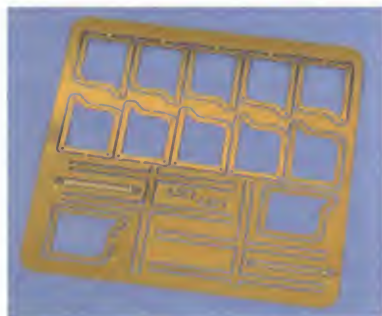


Photo-etched parts are included.



## Stuart Ransley examines AFV Club's 1:35 scale Hanomag communications variant. **BREAKING RADIO SILENCE**

**T**he Sd.Kfz 251/3 Ausf. C was a multi-role communications vehicle. It was usually found in the Headquarters sections of infantry and armour units and it was also used by the Luftwaffe for ground to air communications. From 1942, the prominent frame antenna around the top of the vehicle was usually replaced with a star rod antenna that was less conspicuous.

On opening the box of AFV Club's kit of the Sd Kfz 251/3 we find a 16 page instruction manual, an A4 colour print of the box art, one small etched brass fret, a decal sheet with markings for 5 vehicles and 14 sprues with approximately 412 parts. The 16 page instruction manual is well laid out and easy to follow.

This includes the relevant colour listings for paint from Gunze, Humbrol, Revell and Life Colour, which I think is an excellent idea.

Moving to the sprues, all parts on the review kit were crisply moulded but some had some minor flash, though this would be easy to remove. The inside face of the outer half of the drive sprockets have some substantial flash around the ejector pin marks. The tracks provided with the kit are of the loop type. These are well detailed but could be replaced with aftermarket tracks that AFV Club and others produce, which give a better appearance for dead tracks with sag such as these. There are no separate tyres provided for the front wheels, these being moulded in two halves. Some will like this but

I prefer separate tyres. It makes painting easier. The kit includes a very nice reproduction of the radio set and a highly detailed interior.

In summary, this kit is quite well detailed and accurate with only a few minor issues that can be easily rectified, AFV Club's Hanomag represents good value and will build up to be a very nice representation of the Sd.Kfz 251/3 from the 1940 - 42 period.

Highly Recommended. ■

Thanks to J.B. Wholesalers for the review sample  
[www.jbwholesalers.com.au](http://www.jbwholesalers.com.au)

AFV Club is available in the UK from Creative Models Limited  
[www.creativemodels.co.uk](http://www.creativemodels.co.uk)

Mouldings are crisp and well detailed. Each lower side is supplied as a single piece.

Smaller parts are very well done too.

The two front wheels are all-styrene parts. The absence of separate vinyl tyres will please some modellers.

The one-piece "rubber band" tracks are well detailed, but individual links will represent the sag more authentically.

## RANDOM REFERENCE!

### SD.KFZ. 251C

Paul Hilditch actually own his own Sd.Kfz. 251 Ausf. C conversion in 1/1 scale, and he has sent some photos for us to see.

I read the excellent article on the 251C in Issue 44 of Model Military International. I have just converted one from an OT810 and this model is an excellent reproduction. You mentioned the D660 manual what is this and where is it from? I would be most interested - as these pictures are great. I still need as much information as possible.

Thanks,  
Paul Hilditch  
events co-ordinator nww2a  
[www.nww2a.co.uk](http://www.nww2a.co.uk)

**Ed Says:** Hi Paul. I will have more information on the D660 manual in the next issue of Model Military International.



Paul's full-scale Sd.Kfz. 251 Ausf. C was converted from a Czech OT810 half-track.



This Sd.Kfz. 251 runs and is used for re-enactments.



This is a very impressive reproduction.





## Small Scale A round-up of the latest news and releases in 1:72 and 1:76



### MINIART

#### 1:72 EASTERN EUROPEAN VILLAGE HOUSE. ITEM NO. 72016

Miniart from the Ukraine, usually produce products for 1:35 scale armour but here is something for the Braille Scalpers in 1:72

This is a very simple model of an Eastern European Village House with a thatched roof. There are 28 parts, with the major elements being four walls, two long and two short, each with two windows and the long ones with a door. With separate doors and window shutters, the door apertures can be cut out from the inside if you wish to model them open, and a four piece chimney make up the entire injection moulded part of the kit.

The base and thatched roof are vacformed from reasonably thick plastic but should still be quite easy to work with. The windows have frames in them and clear plastic could be added on the inside if desired. All surfaces have good detail, rendering for the outside walls, wood panelling for the doors and shutters and appropriate texture for the roof.

The box art shows the house with a tiered layering of the thatch whereas the vacformed part has only one layer. Not being familiar with thatches, I am not sure which is correct. There is a small amount of flash on some small parts but overall the moulding is quite clean.

The end-opening box, as mentioned above, has artwork on the front and a build diagram on the back with four views of a built-up model on one side. There is no interior supplied and whether it could be built in a derelict state would depend on the skills of the modeller.

Either way, this kit will be welcomed by the small-scale fraternity as an inexpensive and easy to build diorama accessory.

Recommended

Thanks to Creative Models Limited for the sample [www.creativemodels.co.uk](http://www.creativemodels.co.uk)

Glen Porter



### D VISION MINIATURE / DTOYS

#### 1:72 M1134 STRYKER ATGM. ITEM NO. BT72-006

In addition to multimedia accessories, DTOys of Korea has now branched out to produce full kits. D Vision Miniature is a brand of DTOys that has just released a 1:72 scale M1134 Stryker ATGM (Anti-Tank Guided Missile). This versatile personnel carrier is fitted with guided missiles that can destroy enemy armour while remaining out of tank gun range. The M1134 Stryker ATGM is currently seeing front line service in Iraq and Afghanistan.

D Vision's 1:72 scale Stryker ATGM is based on the Academy 1:72 M1126 kit. Indeed, the stout white box includes the entire plastic kit. Academy's Striker is very nice indeed, with fine detail and an accurate outline.

D Vision has added a one-piece resin upper hull, a missile head and nine wheels for the conversion to the M1134 ATGM.

The resin upper hull is a real work of art, with beautiful detail all cast in place. Top hatches are moulded open, so you will be able to crew up your vehicle.

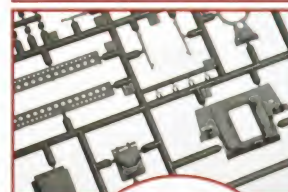
The missile head is another one-piece wonder with excellent detail. The resin wheels are very well done, and they include a spare.

D Vision Miniatures' M1134 ATGM should be fast and easy to build, and the level of detail approaches that of larger scales. This is a lovely package.

Highly Recommended.

DTOys products are available online from Lucky Model [www.luckymodel.com](http://www.luckymodel.com)

Brett Green



### MPK MODELLBAU MK72

#### 1:72 HUMBER SCOUT CAR MK. I/II. ITEM NO. MK72011

This model turned up out of the blue and oh, what a gem. I had never heard of MK72 or MPK Modellbau before so I didn't know what to expect.

MK72's 1:72 scale Humber Scout Car comprises 88 parts in light grey resin with unbelievable detail and almost perfect moulding. In fact, I would have been more than impressed if I had seen this level of detail in 1:35 scale. It has a full interior, both fighting compartment and engine bay and a five-piece driver figure is also included.

There is a small amount of flash on some parts but not enough to worry an experienced small-scale modeller; and experience you will need.

But there has to be a downside right? Well, the kit was not supplied with detailed instructions or decals. All of the tiny delicate parts were squeezed into a small transparent box with just an A5 sized sheet sporting seven photos of a partially assembled model.

Now, I doubt that this kit would go on sale without instructions, as there are just too many tiny parts that will need identifying not to mention where they go on the model.

The decals I'm not sure about as on their web site ([www.mpk-modellbau.ch](http://www.mpk-modellbau.ch)) they sell decals for this kit.

Looking at the parts, I could not find a steering wheel or the Thompson sub machine gun. The picture on their website suggested that it should be there, so I wondered what other parts might be missing.

Nonetheless, I am very impressed with this wonderful model.

Highly Recommended.

Thanks to MPK Modellbau for the sample [www.mpk-modellbau.ch](http://www.mpk-modellbau.ch)

Glen Porter







# Letters

**WRITE TO:** MMI Letters, ADH Publishing, Doolittle Mill, Doolittle Lane, Totternhoe, Bedfordshire, LU6 1QX, UK  
Tel: 01525 222573 Fax: 01525 222574 Email: editor@modelmilitary.com  
The views expressed are not necessarily those of the editor or publisher.  
Letters may be edited for publication.



steel ammunition bodies with LRDG manufactured wooden 'greedy boards' and wooden equipment lockers attached to the front face. In addition the W/T - Navigator's vehicle had a radio compartment added to the front, right hand body, enclosed by one sliding panel and a door which could be lowered to act as a table. The other vehicles did not use the radio compartment, and the sides of their bodies were plain panels, mirroring those on the left. The new Chevrolets used two speed differentials and in

action proved to be almost as good at cross-country travel as the earlier four wheel drive Fords. A vital advantage over the Fords was a far lower fuel consumption, meaning that less fuel was needed on patrol, cutting weight and allowing more room for other supplies.

On to the gun trucks: The 37mm Bofors were never carried by the 30 cwt Chevrolets; by the time they entered service the 20mm Breda was the heavy weapon of choice. Photos of gun-trucks show that there were at least three variations on the conversions, apparently dictated by the individual patrols. R1 and R2 patrols did away with the greedy boards entirely and relied on a frame built up from welded square (?) steel tubing to stop the Breda from firing at a low angle to the front (thus threatening the driver and vehicle commander), as well as keeping the stowage from dumping itself over the weapon and gunner. At least one S Patrol vehicle had three greedy boards; the original with two half-height greedy boards on top. T1 and T2 Patrol Chevrolets had the greedy boards extended, overlapping the front of the Godfredson body and nearly reaching to the back of the bench seat.

Incidentally, the primary reason for the higher greedy boards was, as mentioned, to stop the Breda from shooting up its own crew, or hitting them with a swinging barrel, while traversing forward at a low angle. A secondary reason was to increase stowage space. As it was, because of the room taken by the Breda, and because there was a fourth crew member, other trucks carried some of the gun-truck's stowage.

LRDG markings are a topic

in themselves; the WD (War Department) numbers used on the LRDG's 1533X2s all fell in the sequence L46188xx to L46189xx - unfortunately the number L46183xx on the Tamiya decal sheet was not used at all on the 1533X2s (sorry Brett). Also on the decal sheet, 'T9' was L4618825, and carried the name "TE AROHA III" (Maori words starting with T were used by T Patrol) of T1 Patrol. The patrol i/d markings were not fixed, so a truck could have several numbers (eg T9, R2, S6) during its career. T9 TE AROHA III later took the number T2 and was destroyed while carrying this number in an air attack in the aftermath of "Operation Caravan" a raid on Barce on September 13/14 1942. TE TANIWHA (a Taniwha is a local spirit, often mischievous or nasty) was T8 with an unknown WD number.

Te Aroha III was a W/T truck as per the kitset. As Tobias has stated, there was one W/T truck per half Patrol of six vehicles. The W/T vehicles were vital for communications; on a patrol signals to and from base were limited to short morse code transmissions (voice was only used between patrol units). If the W/T truck broke down the mission was usually cancelled. In addition to the No. 11 W/T set a commercial Phillips type 635 receiver was carried by the radio truck to listen out for GMT navigation time pips and, sometimes,

when there was no chance of being heard by snooping enemies, music was picked up and quietly played during rest breaks and when the unit stopped overnight. (Note, too, that Patrol was usually capitalised when referring to an LRDG unit - a reasonable description of the LRDG's organisation can be found on pp. 12-13 of the New Vanguard 32)

I must confess this is the first issue of MMI I have read, mainly because I was interested in the LRDG articles. Nevertheless I am impressed with the quality of your publication and it will be on my must read list in future.

**Best Regards**  
**Jeff Webb**  
Dunedin, New Zealand.

**Ed Says: Hi Jeff,**  
Thank you very much for your informative clarification. We will have more on the LRDG in future issues. I hope that you will continue to enjoy MMI.

## AC MODELS' SUPPLIERS

Hello, I was enjoying the Issue 44 of Model Military again and decided to look up information on AC Models that you highlighted. I could not find anything. I e-mailed my military kit supplier and they could not find anything out either. Could you help out a modeller here in the States were they might be able to get the Kiwi set you reviewed?

**Thank you**  
**Chuck Homolka**

**Ed Says: Hi Chuck,** They really are great looking figures, aren't they? You can purchase AC Models figures and busts from Colorado Miniatures in the USA. Their website address is [www.coloradominiatures.com](http://www.coloradominiatures.com)

## LRDG CLARIFICATION

It is good to see the comprehensive articles on the LRDG in the November 2009 issue of MMI. This is a unit that is often overlooked in favour of 'glamour' units such as the SAS, yet the LRDG pioneered and perfected most of the techniques for stealthy desert travel and reconnaissance behind enemy lines. In fact the early SAS relied on the LRDG for transport before they received their jeeps. Unfortunately there are some ambiguities in Tobias' article, and Brett's build article that need to be cleared up. In the first paragraphs on LRDG evolution the implication is that the LRDG used 30 cwt 1533X2 (Canadian) Chevrolets from 1941. In fact 200 of these vehicles were ordered specifically for the LRDG and they entered service in February/March 1942, replacing 30 cwt Ford F30 which, in turn, had replaced earlier Chevrolet models. The 1533X2s used Godfredson 4B1



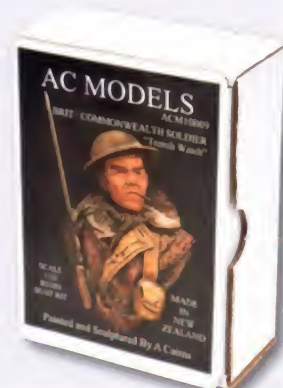
Jeff's 1:35 scale LRDG Chevy built as "TE AROHA III" using Tamiya's original issue kit.

## ALPS PRINTING

I have just read Issue 42 (I know I'm a bit behind the drag-curve!) and I see that you got the white decals for the Citroen printed by someone on an ALPS printer. I need to get some custom decals printed in white and was wondering if you know of any companies that provide this service in the UK. I've looked at Fantasy Printshop but they only do batches of 25 sheets of A4 and I only need 1 of A5 size. Thanks for a great magazine, and keep up the good work.

**Si Tomlinson**  
Oxford.

**Ed Says: Hi Si,** I had mine printed by a friend with an ALPS printer. I know that some model railway companies in Australia do ALPS printing by commission, but your best bet might be to place a request online in the Discussion Forum of a website like Missing-Lynx or HyperScale. Try the General Forum on Missing-Lynx [www.missing-lynx.com](http://www.missing-lynx.com), or the Plane Talking Forum on HyperScale [www.hyperscale.com](http://www.hyperscale.com)





# Incoming

## PRO ART MODELS

**1:35 UPGRADE DETAIL SET FOR M1078. ITEM NO. PAU-35031**

**1:35 INTERIOR SET FOR M1078. ITEM NO. PAU-35033**

Pro Art Models from Belgium has released several detail and upgrade sets for Trumpeter's recent 1:35 scale M1078 LMTV modern US truck. The first and most comprehensive of these is item number PAU-35031, a full upgrade kit for the vehicle. This set contains around 74 parts in pale cream coloured resin plus a large photo-etched fret. The jewel in the crown is the complete replacement cab. This features separate doors for the driver's and passenger's side – probably the greatest omission from the Trumpeter kit. In addition, Pro Art Models' set fits out the interior of the cab, including replacement seats. The exterior is not neglected either, with resin and photo-etched parts for new fuel tanks, exhaust, wheel details, tray enhancements plus chains and more for the spare wheel holder.

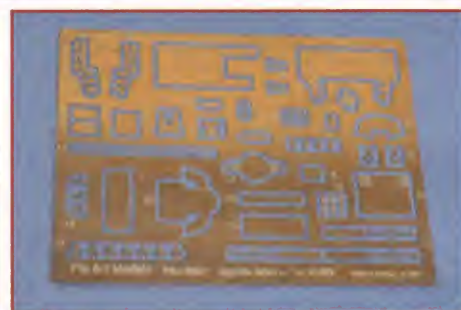
If you like the vehicle but your ambitions (or budget) do not stretch quite this far, Pro Art also offers an Interior Set (PAU-35033), which is effectively a sub-set of the parts included in the full upgrade.

Both of these M1078 upgrades will be worthwhile enhancements to the Trumpeter kit. Some previous experience working with resin and photo-etched parts will be helpful.

Highly Recommended to experienced modellers.

Thanks to Pro Art Models [www.proartmodels.be](http://www.proartmodels.be) and Creative Models Australia [www.creativemodels.com.au](http://www.creativemodels.com.au) for the samples.

**Brett Green**



## PRO ART MODELS

**1:35 HMMWV ARMORED DEMOUNTABLE KIT (HARD)**

**INCL. AIRCO (4 DOORS). ITEM NO. PAU-35028**

**1:35 AIRCO SYSTEM FOR ALL US VEHICLES.**

**ITEM NO. PAU-35009**

The HMMWV Armored Demountable Kit (HARD-Kit) offers a versatile, interchangeable armour system that can be readily installed on most HMMWV variants. The system can be field-installed to provide perimeter, roof and underbody armour at a high level of ballistic and blast protection and is available in two door and four door configurations.

Pro Art has now released a four door version of this HARD kit upgrade for Tamiya's Humvee in 1:35 scale, and they have also included an air conditioning unit – universally seen on vehicles deployed on current operations in the Gulf and Afghanistan.

The set comprises 25 parts in pale yellow resin plus three generous photo-etched frets.

The parts are beautifully cast – especially the large soft top. The resin is cast on fairly narrow strips, so cleanup should be quite straightforward.

All the exterior parts required for this conversion are included, such as replacement doors, side appliqué armour and rear tray details.

The AIRCON unit is very nicely done, with multiple layers of photo-etch provided for the characteristic fans, a PE frame and resin body.

The AIRCON unit and three mounting options is also available from Pro Art as a separate set (Item No. PAU-35009). This versatile set will be suitable for all US vehicles currently in service.

These are both interesting accessories that will update Tamiya's 1:35 Humvee in particular to the configuration used on the front lines today. Great stuff.

Highly Recommended.

Thanks to Pro Art Models [www.proartmodels.be](http://www.proartmodels.be) and Creative Models Australia [www.creativemodels.com.au](http://www.creativemodels.com.au) for the samples.

**Brett Green**



## PRO ART MODELS

**1:35 HUMVEE SUPER SWAMPER WHEELS.**

**ITEM NO. PAU-35019**

The Super Swamper wheels are used on current Dumvees and up-armoured Humvee M1114 vehicles, so it will be suitable for the aforementioned conversion amongst others. Five resin wheels are provided, including one spare. Casting is perfect, and the detail is remarkable. There are no casting blocks, so the wheels are just about ready to go as soon as they fall out of the box. The tyres are neither flattened nor bulged.

This is a simple and useful upgrade / conversion for your 1:35 scale Dumvee and Humvee kits. Highly Recommended.

Thanks to Pro Art Models [www.proartmodels.be](http://www.proartmodels.be) and Creative Models Australia [www.creativemodels.com.au](http://www.creativemodels.com.au) for the samples.

**Brett Green**





### PRO ART MODELS

#### 1:35 EQUIPMENT SET FOR STRYKERS. ITEM NO. 35008

Pro Art Models has released a nicely detailed set for upgrading the exterior of your 1:35 scale Stryker kits. 21 resin parts are included (which should fit either Trumpeter or AFV Club kits), with a photo-etched exhaust deflector designed specifically for AFV Club. Highly Recommended. Thanks to Pro Art Models [www.proartmodels.be](http://www.proartmodels.be) and Creative Models Australia [www.creativemodels.com.au](http://www.creativemodels.com.au) for the samples.

Brett Green

### TRUMPETER

#### 1:35 GERMAN 17CM KANONE 18 • ITEM NO. 02313

The German 17cm Kanone 18 was developed by Krupp and served from 1941 to 1945. It was intended to be employed at Corps level to provide long-range counter battery support, and with a range of 29,600 meters it was very capable of this task. It filled the same role as the 21cm Morser 18 up to 1942, and then took over entirely. Technically the gun was an excellent weapon, but it was expensive to produce and maintain, was quite difficult to manoeuvre and slow to set up. Many of these guns were lost due to crews abandoning them to avoid capture from the advancing Allied forces.

Trumpeter's 1:35 scale 17cm Kanone 18 comprises 401 plastic parts on 14 sprues, 4 vinyl tyres, two brass tubes and two metal springs. Also inside is an A4 coloured profile drawing and a instruction booklet consisting of 25 stages on 24 pages.

The parts are crisply detailed and flash free, but there are some small delicate looking parts that will require care when removing from the sprue.

The instructions should be thoroughly examined before starting this kit, and you will need to pay close attention to the alignment of parts during assembly. You will see this especially when you construct the main gun carriage, otherwise you may encounter problems further into the build.

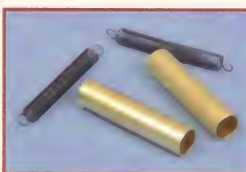
I would recommend building this kit in sub-assemblies. This will also ease painting and weathering as there appear to be a lot of nooks and crannies that will be difficult to access when the entire model is together. Once built this is going to be an impressive kit at 423.8mm in length, 82.1mm wide and 83.2mm in height. It may be built in either fighting or transport mode. Whichever you choose it is going to look great.

This is a fantastic looking model and recommend it to all. My only slight disappointment is the colour choice given, overall Panzer Grey. However, I am sure with some research more interesting schemes could be found. Grab this one, it is worth it!

Highly Recommended.

Thanks to JB Wholesalers for the sample [www.jbwholesalers.com](http://www.jbwholesalers.com)

Andrew Judson



# eduard

## BEST BRASS AROUND

35977 Panther Ausf.A late 1/35 (Dragon)



35977 Panther Ausf.A late 1/35 (Dragon)



35978 Zimmerit Panther Ausf.A late 1/35 (Dragon)



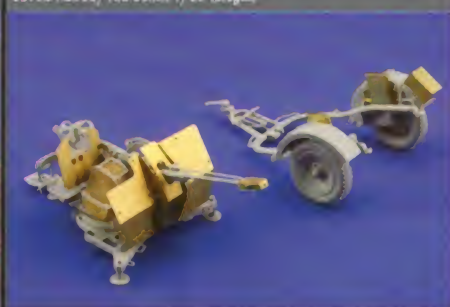
35950 Flak 38/103 30mm 1/35 (Dragon)



35950 Flak 38/103 30mm 1/35 (Dragon)



35950 Flak 38/103 30mm 1/35 (Dragon)



[www.eduard.com](http://www.eduard.com)



## SCRATCH BUILDING

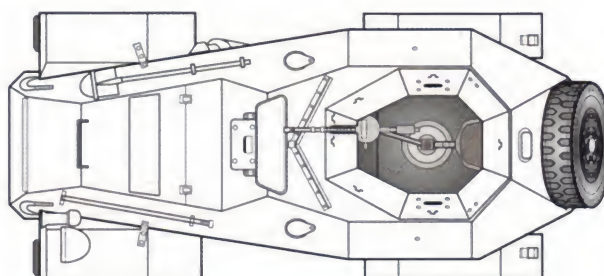
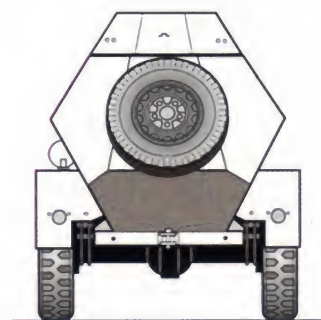
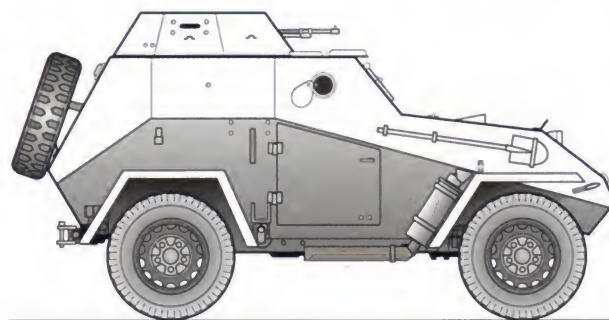
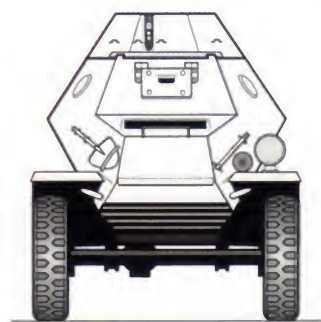
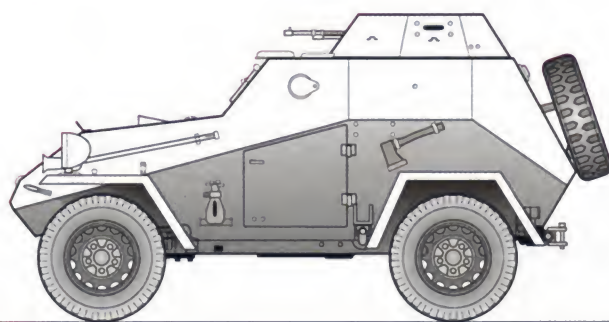
**T**his column marks the beginning of a new venture that I have long looked forward to. In conjunction with George Bradford, we will include 1:48 scale drawings from time to time of vehicles from that I believe can be produced or converted fairly easily from available kits. While some of the drawings will require a fair bit of scratch building, I think all are within the boundaries of possibility for the average builder. From my experience, scratch building can be the most satisfying of all modelling pursuits. Sure, it takes a little longer and your first attempts might not be quite what you expected, but when you get it right there is no better feeling. When I was younger, scratch building was looked upon as a "badge of honour" by many that I knew, and going the extra mile was expected. We live in different times now and like many of you, I am "idea rich" but very much time poor. Still, I often ponder when I buy conversions in 1:48 scale and think, I could do that or I could have done better than that! It has become clear to me, that armour building in 1:48 offers many of us a chance to do a little scratch building and in doing so make our building experience that much more enjoyable. Plastic kit parts, for example, can be overly thick as a result of moulding limitations. Conversely, resin kits have to be fairly bulky to survive the de moulding process. Here is where the humble sheet of plastic card comes into play. Scale thickness is

best addressed not by laboriously sanding down parts but by scratch building replacement parts. Take for example, a simple flat hatch cover. It is far easier to fabricate one out of plastic card than to sand down the original. Open flat sided turrets are another example. Those of you that have read my article on my 1:48 Tamiya Wirblewind a year or so back would have noted that I sanded the turret walls down. On reflection a better (and indeed quicker) solution would have been to scratch build the turret out of plastic card. Some of you might be tempted to say "yes but why not use brass?" Well, the answer here is simple. Plastic card is far easier to glue! I still believe there is a market out there for items like a flat-sided turret laser cut from plastic card. This would do away with super glue (which can be very unforgiving) and give us the option of using liquid glue. I would encourage all of you to give this scratch building "gig" a go. It will open up a whole new world of modelling options.

Until next time *Luke Pitt*

### BA-64B Model 1943 Light Armored Car

© GEORGE R. BRADFORD  
December 28, 1994  
**R12**





## ECHELON FINE DETAILS

### 1:48 DECAL REVIEW

Echelon Fine Details deserve a pat on the back for these decals. Finally a mainstream decal manufacture has seen fit to scale down some of their previously released 1:35 scale releases. The four outlined in this review are small but perfectly formed. One thing that I do particularly like about these decals is the placement guide is very well printed and is quite inspirational. I found myself with a desire to produce a model on all of these sheets. All of the sheets have the clear film are thin cropped very close to the edge of the artwork and are very thin and well printed.



#### AXT 48002: SPZABT 505 TIGER II HUNGARY

The first sheet is for Tiger II models and includes five machines from sPzAbt 505 operating in Hungary. The generic numbers and Roman numerals should be applicable on 505 Tiger I's as well. Although the suggested marking options provided in the instructions, you can choose to mark any of the 505 Tiger I's. All of the Tigers featured on this sheet have Zimmerit applied so the "Atak" or Voyager sets would be applicable with this sheet. All the machines featured have a sand base and a red brown camouflage colour.



#### AXT481008: SCHWERE PZABT 506 & GRUPPE FEHRMANN TIGER I'S

The 506 companies Tiger I's had a distinctive emblem that came in two designs and sizes. From the chronology of photographed 506, it is almost certain that the smaller one was used first (found on Early's and Mids-early, non-zimmerit) Two of these are provided on this sheet and are both in a whitewash. The next 5 featured are mid model Tiger I's and have Zimmerit with a sand base and a brown camouflage colour. The last two machines featured are the Gruppe Fehrmann Tiger I "Hybrids which have a mix of early turrets on late model hulls and come in a mix of camouflage finishes. The best kits for these would be the AFV Club kits.



#### AXT481013: 2 & 3 PZ.DIV., DAS REICH & HJ PANZER IV'S (AUSF. H & J)

A complete set of markings are provided for 18 of the 2nd and 3rd Divisions Panzer IV's that fought during the Normandy campaign. Some machines have their hull side skirts clearly marked from 1 to 5, indicating whether it is a left or right, which is a nice touch. The second part of this set covers three specific Pz. Division. Panzer IV's. All three vehicles were marked with the black "Berlin Bear" over white shields. The third part of this set covers "Das Reich" Panzer IV's fighting also in the Normandy. Most of the turret numbers are very roughly painted except for "837" on the real vehicles and this feature have been very well done on this sheet. All of these machines had a sand base with variations of brown and green as the camouflage on them.



#### AXT481018 DAS REICH & WIKING PANZER III AUSF. J/L/MS

The set covers two prime users of Panzer III tanks during their Ostfront campaign: Das Reich and Wiking. The markings for the Das Reich portion covers a wider range of models ranging from PzBwg Ausf. H, L and Ms. Of the L models, one Tank "233" features a personal name, "Ernst Stammler" above the turret number. Among the DR tanks, several were of the Kursk period. Most of the vehicles featured have a very faded 3 colour camouflage finishes with one having full side skirts in a very attractive two tone green and sand finish.

All of these sets are very well done and I urge anyone who has an interest in these vehicles to buy them, as decals don't really come much better than this.

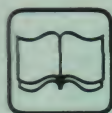
Echelon Fine Details may be purchased online from their website [pachome1.pacific.net.sg/~kriegsketten/](http://pachome1.pacific.net.sg/~kriegsketten/)  
 Luke Pitt

## New Products

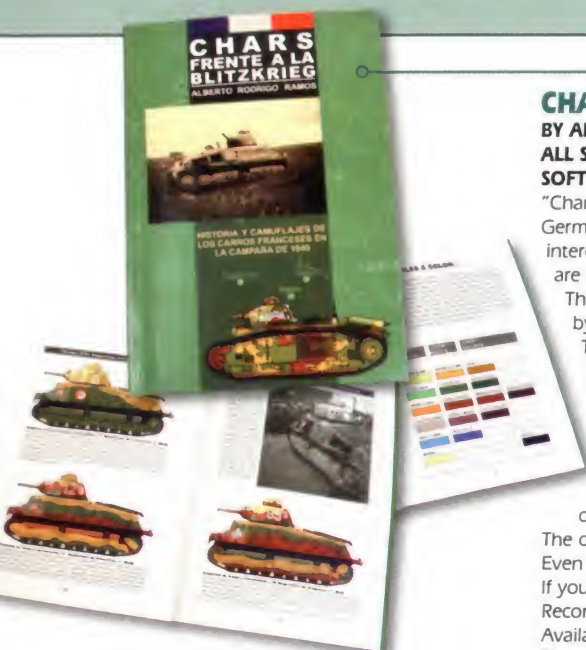
### KENGI

Ken Swanson next release will be US Gun Motor Carriage and should be well worth the wait. Expect it in the third quarter of this year.





# Book Reviews



## CHARS FRENTE LA BLITZKRIEG

BY ALBERTO RODRIGO RAMOS

ALL SPANISH TEXT AND CAPTIONS • ISBN 978-84-613-0030-3

SOFTBOUND A5. BLACK AND WHITE WITH COLOUR PLATES. 112 PAGES

"Chars Frente la Blitzkrieg" is a 112 page book that covers the topic of French tanks in action during the German invasion of 1940. The book is perfect bound between soft covers, and contains many rare and interesting photos of Char Bs, Renaults, Hotchkiss, Somuas, Panhard armoured cars and more. The images are accompanied by detailed captions, and they are supplemented by maps and other diagrams.

The text kicks off with a description of tank development prior to the commencement of WWII, followed by a brief outline of the British tanks involved in the Battle of France – the Matilda I and II, Vickers Light Tank and Cruiser Tanks Mk.I, II and IV.

As the title implies though, the vast bulk of the book is devoted to French vehicles and their deployment against Germany's Panzer Divisions in 1940.

The title closes with 14 pages of typically wild French camouflage schemes on Hotchkiss H35 and H39, Renault R35, Somua S35 and Char B1 bis tanks. There is plenty of inspiration for model finishes here, and the section is prefaced with a process printed colour chart. Interestingly, a corresponding chart has also been printed in black and white, presumably to demonstrate the contrast between the shades in the monochrome photos of the book.

The only downside is that the text and captions are presented solely in Spanish.

Even so, the photographs are fascinating and the profiles very attractive.

If you can read Spanish, this will be a fabulous reference title. For the rest of us, there is plenty of eye candy!

Recommended.

Available direct from the author by emailing [info@lajauladelgrillo.com](mailto:info@lajauladelgrillo.com)

Brett Green



## KAMPFPANZER LEOPARD 2

BY FRANK LOBITZ

TANKOGRAD PUBLISHING • ISBN 978 3 936519 08 0

HARDBOUND A4. FULL COLOUR. 320 PAGES

Every once in a while, a book comes along which you just can't fail to be impressed by, this new Tankograd volume on the Leopard 2 MBT in Bundeswehr service is just such a book.

Written in dual German – English text and with over 450 photographs, line drawings and detail sketches, no area of the Tank's development or production are left uncovered. The book charts the vehicles history, from the ill-fated MBT70, through Leopard 1 and the Leopard 2 prototypes, right up to the future development of Leopard 3.

The full tank development is photographed and documented, covering its combat capabilities, ammunition, camouflage, and it's recovery and engineering variants. There are also some great photographs taken during Live firing exercises in Canada, as well as on active deployment in Kosovo. The Leopard 2 is hailed as one of the finest and most formidable Main Battle Tanks in service today, it's also a firm favourite with model-makers and this book should serve as the ultimate reference.

Hardbound and printed in full colour, this series will surely become the definitive work on the German Leopard 2, look out for the following parts, to be reviewed as we receive them.

Highly Recommended.

Thanks to Justin at [www.bookworldws.co.uk](http://www.bookworldws.co.uk) for the review sample.

Darren Thompson



## BRITISH SPECIAL NO.9011 RECCE - THE EYES AND EARS OF 1ST (UK) ARMoured DIVISION

BY DANIEL NOWAK AND TIM MÄTZOLD

SOFTBOUND – FULL COLOUR – A4 – 64 PAGES

'To see, without being seen' is the task given to the Armoured Reconnaissance Regiments, to gather as much information on the enemy's position, strength and intentions, to best allow its own forces a tactical advantage.

The latest Tankograd British Army Special follows the troops of the 1st Queen's Dragoon Guards and the The Cavalry Rgt. of Wales and the Border Counties, on manoeuvres in Germany.

The first 8 pages give a brief, but fairly detailed written description of the History, operational roles and vehicle make-up of the RECCE Regiments, in Tankograd's usual German/English split text.

The remaining pages are packed with 122 full colour photographs, predominantly of the British CVR(T) family of vehicles. Beginning with short sections on the support and logistics troops, the command troops, the fitters and first aid posts with Samson, Sultan and Samaritan all featuring, but the majority of the pictures are of the men and vehicles of the Reconnaissance troops, including Scimitar, Spartan and Striker, many of which are heavily camouflaged and brimming with equipment, perfect reference for the modeller.

A final chapter features the current and future vehicle developments of the RECCE Regiments, with vehicles recently returned from Afghanistan and the Gulf These include the 'Supacat Jackal', the 'Ridgeback' MPPV and 'Mastiff' HPPV, as well as the latest members of the CVR(T) family, all sporting the new Enhanced Protective Bar Armour.

This is an excellent volume for all modern armour fans.

Highly Recommended.

Thanks to Justin at [www.bookworldws.co.uk](http://www.bookworldws.co.uk) for the review sample.

Darren Thompson







## SOVIET SPECIAL NO.2008 RUSSIAN ARMY ON PARADE

BY JIM KINNEAR  
TANKOGRAD PUBLISHING  
SOFTBOUND - A4 - FULL COLOUR - 64 PAGES

In May 2008, Russia's Red Army held it's first Military Parade in Moscow's Red Square, since the break-up of the Soviet Union, in the early 1990's.

This latest Tankograd special is dedicated to this event and is brimming with full colour photographs of all the latest Russian hardware, resplendent in it's fresh coats of camouflage paint.

There are a total of 120 photos, most are 2 or 3 to a page, with the odd full page picture thrown in for good measure.

Coverage starts with Russia's answer to the US 'HMMWV', the GAZ-2330 Armoured car, comprising a half-page written description, followed by 3 pages of photos.

Each vehicle is covered in a similar manner, including the BTR-80 APC, BMD-4 and BMP-3 MICVs and the 2S25 Airborne SP Gun.

Next we move on to the heavy stuff, included are the 2S19 SP Howitzer and T-90 MBT, followed by several different mobile missile systems, finishing with the enormous RS-12 'Topol' Intercontinental Ballistic Missile System, as only the Russians can!

The final few pages feature various Recovery vehicles, Trucks and Transporters, all of which have the potential to be stunning modelling subjects.

The only thing missing from this book is the whitewall tyres!  
Highly Recommended.

Thanks to Justin at [www.bookworldws.co.uk](http://www.bookworldws.co.uk) for the review sample.

Darren Thompson

## TANKOGRAD - SOVIET SPECIAL NO. 2007 SOVIET TRUCKS OF WWII

BY JIM KINNEAR AND JOCHEN VOLLERT  
TANKOGRAD PUBLISHING  
SOFTBOUND - A4 - 64 PAGES - SCALE PLANS

The latest volume in the Soviet Special series covers Soviet trucks during WWII, in both Red Army and Wehrmacht service.

With 134 period photographs overall, 80 of which show the various trucks in Russian service, including the GAZ-AA and GAZ-MM, ZiS-5 and 5V, as well as the older YaG-4, 6 and 10 trucks, to good effect. As well as the standard truck variants, many other different versions are covered, from the well-known Anti-Aircraft, Ambulance and Katjusha versions, through to the somewhat bizarre looking sound location vehicles, all pictures are 2 or 3 to a page, with generally very informative captions and as usual the text is in dual German/English.

A brief written history is assigned to each different mark, as well as some very nice 1:35 scale plans, totalling 5 vehicles in all, as well as single drawings highlighting alternative details and features.

Highly Recommended.

Thanks to Justin at [www.bookworldws.co.uk](http://www.bookworldws.co.uk) for the review sample.

Darren Thompson



## TANKOGRAD TECHNICAL MANUAL SERIES NO. 6018 U.S. WWII M19 TANK TRANSPORTER NO. 6019 U.S. WWII M25 TANK TRANSPORTER DRAGON WAGON

BY MICHAEL FRANZ  
SOFTBOUND - A4 - 64 PAGES

Here are the latest two offerings from the Tankograd Tech Manual Series, both focussing on U.S. Tank Transporters and their respective trailers.

Both the 'Diamond T' and 'Dragon Wagon' are available in kit form, making these two volumes ideal for anyone wanting to build and detail the respective models.

Both volumes follow the familiar Tankograd formula which, for those not familiar provides both English and German text, including captions and is split almost equally between period photographs of the vehicles in action and technical photos and schematic drawings, taken directly from the original tech manuals.

All areas of the vehicles are explored, from chassis, drivetrain and suspension, right through to the electrical circuitry and cabin interiors. Changes in production details are highlighted throughout and the M9 Rogers and M15 Fruehauf heavy trailers for the respective vehicles are also very well covered.

Highly Recommended.

Thanks to Justin at [www.bookworldws.co.uk](http://www.bookworldws.co.uk) for the review sample.

Darren Thompson





# Next Issue

On sale April 1st 2010

## Fitters Amtrack

Andrew Judson brings us the HobbyBoss AAVR-7A1 in 1:35 scale.



## Sd.Kfz. 7 Half Track

Andy King returns to build Trumpeter's 1:35 scale mid-size German half track.

## THINK TANK - British WWII Middle East Colours

William Marshall uncovers original documents and analyses the application of British and Commonwealth WWII camouflage in the Middle East.



## SKP Tilly

Jose Brito builds the challenging SKP multi-media Tilly in 1:35 scale.

## FOR YOUR SAFETY

Don't forget, when using solvents such as glues, paints, thinners and cleaning agents, always ventilate your work area thoroughly and wear a face mask.

When using power tools, side cutters or any tool that can suddenly break or create high-speed airborne particles, wear approved eye protectors with hard, clear lenses. Please always model in safety!



...and much more!

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Due to many influencing factors, we cannot guarantee the appearance of the above projects, but we'll try our best!





# The Last Post...

**- STOP PRESS -**

## TAMIYA 1:35 SCALE TILLY



**T**amiya has announced an all-new 1:35 scale Austin Utility, due for release in the first half of this year. We will have more news and images in the next issue of Model Military International.



### ABTEILUNG MODELLING OIL COLOUR

#### FADED U.N. WHITE AND GERMAN GREY HIGHLIGHT

Mig's Abteilung Oil Colours have been designed as a way to create fading and ageing on a fresh paint coat. The latest two additions to the range are for faded U.N. White, and German Grey Highlight.

Both of these overall colours present a challenge if you want to obtain a varied and interesting finish. Once again, these oil based products should ideally be used over acrylic paints (or at least an acrylic clear top coat). The effects can be varied by altering the ratio of thinner to paint.

If you have not used these fading and highlighting products before, it is well worth a try. Before committing to a new model, practice different methods of application on an older built model in your collection or on a scrap of painted plastic. Recommended.



### NEW FILTERS

#### STANDARD RUST EFFECTS, LIGHT RUST EFFECTS

The newest products in Mig's Filter range are something a little bit different. Standard Rust Effects and Light Rust Effects are, as the name implies, a new way to deliver the impression of rust to your plastic, resin and metal parts. These filters should be applied over Matt Acrylic paints. The best result will be obtained if the liquid is applied randomly and in thin layers, allowing each coat time to dry. The two filters may be used in combination for even more variety.

I have used these products myself (as you can probably tell by the cap on the Light Rust Effect bottle!) and have been suitably impressed.

Highly Recommended.



### MIG PIGMENTS

#### LIGHT EUROPEAN EARTH AND FRESH RUST

Mig Productions has also expanded their Pigments range with two new shades - Light European Earth and Fresh Rust.

I have already used the Fresh Rust pigment on the exhaust of a current project. I am very pleased with the result. The pigment was dissolved in a small container of enamel thinners (turpentine), and then the mixture was applied to the muffler and exhaust pipe with an old brush. Once dry, excess pigment was removed with a stiff brush.

Mig Pigments may also be mixed with water or applied with a soft brush straight from the jar for a dusty effect.

These two new products will be useful additions to the modeller's finishing armoury.

Highly Recommended

Mig Productions are available online from their website [www.migproductions.com](http://www.migproductions.com)

## EDITOR'S CHOICE MIG PRODUCTIONS

Mig Productions continues to expand its various product lines with new releases of pigments, oil paints, filters, figures and kits. This month alone has seen a busy schedule for this prolific Spanish company: **SYRIAN T-55 CONVERSION. ITEM NO. MP 35-320** **MODERN RUSSIAN FUEL TANK PLUMBING ATTACHMENTS. ITEM NO. MP 35-350**

Mig Productions has released a new 1:35 scale Syrian conversion for Tamiya's excellent T-55 kit. The set comprises 30 parts in cream coloured resin. This is a comprehensive conversion to the variant of the T-55 used from the 1982 Lebanese War and subsequent Lebanese conflicts. Included in the set are a North Korean designed range finder, KPV 14.5 anti aircraft gun cupola mount and drivers foul weather hood. The main armament recoil guard is also provided, as is a set of resin external fuel tank plumbing attachments. Copper wire is supplied for the plumbing. A turret machine gun and tow hooks round out this interesting conversion. There is no surgery required to the donor kit, so Mig's Syrian T-55 conversion will be suitable for even less experienced modellers. Mig Productions has also released the fuel tank plumbing attachments as a separate set. These are suitable for a range of vehicles but will be especially handy for Trumpeter's new T-62. Both Highly Recommended.





# Desert Eagles

Featuring German Africa Corps soldiers in the starring role together with their supporting vehicles, these two 1/35 Scale MM Series assembly kits match figures and vehicle models to let you create your own diorama scenario.

## GERMAN STEYR TYPE 1500A/01

& AFRICA CORPS INFANTRY AT REST Item 35305

The North African front was the scene of a fierce tug-of-war battle between the mechanized forces of the German Africa Corps and the British 8th Army. The Steyr Type 1500A/01 was one of the vehicles used in this desert battlefield and it earned the trust of the German soldiers with its high mobility. This assembly kit includes a Steyr 1500A/01 along with 4 figures depicting soldiers who are taking a break. The tropical caps, shorts, water tanks, and jerry cans contribute to a vivid image of the desert conditions.



Length: 145.5mm



The 4 figures feature realistic facial expressions and natural poses, making them perfect for depicting non-combat situations.

**1/35  
SCALE**

## GERMAN KÜBELWAGEN TYPE 82

"RAMCKE PARACHUTE BRIGADE" Item 35304

Just when Field Marshal Rommel was facing a critical supply shortage during his advance toward the important objective of Alexandria, the Ramcke Parachute Brigade sent him a welcome gift. This assembly kit depicts the soldiers of this elite unit, which once famously trekked through 350km of enemy territory back to friendly lines, together with a desertized Kübelwagen.



Figures feature tropical caps as well as helmets and jumpsuits specific to paratroopers. Accessories such as weapons are also included.



Length: 109mm

### Add to Your 1/35 Scale Desert Diorama

The German Tiger I tank, 4- and 8-wheeled armored cars, and the 88mm gun are also available in desert garb as 1/35 MM Series models. Pit them against the British Matilda tank in dramatic dioramas.



German Tiger I Initial Production  
Item 35227



German Armored Car Sd.Kfz.222  
"North African Campaign" Item 35286



German 8-Wheeled Heavy Armored Car  
Sd.Kfz.232 "Africa-Corps" Item 35297



German 88mm Gun Flak36  
"North African Campaign" Item 35283



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